A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS-X
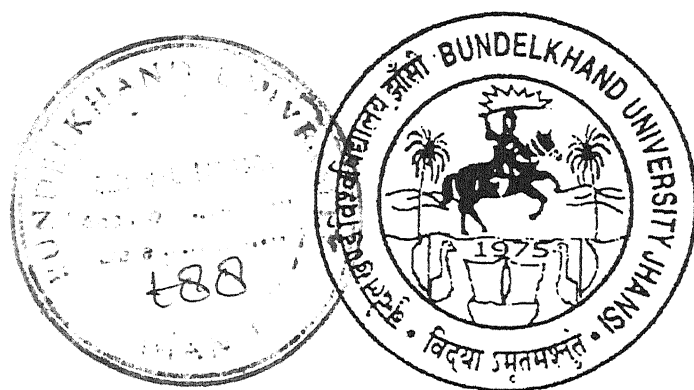
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DOCTOR OF PHILOSOPHY

IN EDUCATION
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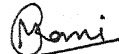Bijnor (U.P.)

FACULTY OF EDUCATION

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DECEMBER-2004

DECLARATION

I, **Manju Rani Singh,** hereby solemnly declare that the present thesis titled, **"A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS-X"** submitted by me for the **Degree of Ph.D. in Education to the Bundelkhand University, Jhansi** is my own work. As per my knowledge & belief the present work is concerned, it has not been submitted earlier by anybody. However, if any thing contrary to this declaration is found later on. I shall be fully responsible for the consequences thereof.

Dated : 15 December, 2004

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CERTIFICATE

Certified that the Ph.D. thesis titled, **"A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS-X"**, being submitted by **Smt. Manju Rani Singh** for the degree of **Doctor of Philosophy in Education, at Bundelkhand University, Jhansi** is her own work and was carried out under my guidance and supervision. The Thesis is her original contribution and is fit for submission for the degree of **Doctor of Philosophy in Education.**

It is further certified that under section (7), the investigator has worked at research centre till allotted time.

Dated : 20 December, 2004

(Dr. D.R.S. Pal)
Supervisor

PREFACE AND ACKNOWLEDGEMENTS

"What is the key to scholastic success?" is one of baffling question, that has engaged the attention of educational researchers. One of the earliest answer, put forward by the psychologists was in terms of intelligence which was held mainly responsible for scholastic success. The empirical results on the basis of I.Q. could not prove that success depend mainly on intelligence. Now the researchers have shifted their attention from cognitive factors to non-cognitive factors.

The present study has shown that the individual achievement is influenced by several non-cognitive aspects of one's own personality.

The present study titled "A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS-X", discusses the prognostics status of six values and sixteen personality factors in the process and development of scholastic achievement. Since intelligence is an undisputed factor in determining academic achievement, the researcher first partialled out its effect on the achievement and later on attempted to study the relative importance of each of non-cognitive factors included in 16 P.F. Questionnaire test personality developed by Dr. R.B. Cattell alongwith six values and the factors prevailing in the Socio-Economic environment. For analysis of the vast data compiled by the researcher, the statistical device of regression equation was employed. Out of 22 independent variables only nine personality factors and four values predict significantly to the academic achievement. These significant variables are the personality traits of A,B,C,G,H, I, Q_2, Q_3, Q_4 and values, viz. Religious, Educational, Materialistic and Social.

Findings of this study may be concluded in brief that the female subjects who are outgoing, more intelligent, emotionally stable, conscientious venturesome, self sufficient and controlled possess good scholastic achievement, whereas the female subjects who are tender-minded, anxiety ridden and tense have poor scholastic records. Except this the female subjects who are more religious and materialistic generally have poor academic records whereas the subjects who are more educated and social have good academic records. Besides provoking valuable educational implications the present study has broken a new ground for further research in the field of education and guidance.

The investigator shall be failing in her duty if she does not express her heartful thanks to her husband *Dr. P. Singh, Senior Reader in Education Department, Vardhman College, Bijnor* who took pains during the course of research.

The whole burden of typing out this thesis fell on *Mr. Naeem, Gulshan Computers, Baba Plaza, Bijnor*, who inspite of his busy schedule, managed to do the work fairly, efficiently in a remarkably short time, for which this investigator is grateful to him.

Dated : 20 December, 2004

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CHAPTER - I

Introduction

The Problem : Its Back Ground And Significance :

The perplexing phenomena of under scholastic achievement and failure among students of various stages of education have been, and continued to be a cause of grave concern to the educationists, teachers, guidance counsellors, educational planners and researchers in the whole world. In developing countries like India where our old values and ideals are disappearing and new values are emerging, our students are finding very hard to exist and adjust themselves in the materialistic era. The problem of failures at high school level is a burning problem and a large number of students have committed suicides when they are not successful at this level. The personality traits are perhaps the important factors for their academic success. Thus, the problem of predicting high school success has drawn more attention of psychologist and educational researchers than any other problem in the field of education.

One reason for this is the tremendous growth in the students population on the secondary level. The increase has out-stripped the expansion of facilities, consequently heightening the competition for admission, at least in the prestigious urban schools, colleges and universities.

The other reason is the growth of programmes designed to identify and support the training of students without standing talents. Such programmes (for example that of the national merit scholarship) reflect the exigencies of the post-sputnik cold war competition and the national need to find persons able to be absorbed and use of high level scientific and technical training.

Hence, the reason for studying this subject is that the value of scholastic achievement score's went up increasing. Parents began to be still more conscious about higher scholastic scores in examinations as they found that their wards were left without an aspired job or vocational stream even after spending sixteen or more years in schooling and consuming the meager economic resources of an average Indian family. Finally, parents tended to fix some standard of scholastic achievement for their children consciously and unconsciously without due consideration of their capacities and essential facilities.

The other reason for the study of this topic that scholastic achievement is an index of the amount learned during the course. Ronald P. Carner has presented a mathematical model in which he has shown that it is possible for the results of final examination to be the best indicator of amount learned. Thus, on the basis of the mathematical model of Ronald, any teacher or employer can very easily understand about the knowledge of the subject matter and amount of knowledge learned during his course. It is also evident from this finding

[2]

that better grades will facilitate promotion to the higher class and also getting employment.

The third reason for the present study is the matter on which the public at large is most deeply concerned. There is a large incidence of failure in the external examination at the end of the school stage. Our country is investing huge funds of public money on the education. But a significant portion of it, is wasted on those who fail to benefit from their education. The large percentage of failure is not small to be ignored.

The failure of such a large number[1] of students particularly when they have been admitted on the basis of upper primary school examination results, year after year by means of annual and other school examinations, thus the real problem is focused on admitting the right kind of students in different streams at the higher secondary stage. According to Dr. Bhatnagar[2] "There are many students who pass the examination, yet they fail to achieve as much as they can in terms of their abilities. These students are known as under achievers. They are the persons who are quite capable, but fail to achieve in conformity with their capacities for several reasons, certain non-intellectual factors may interfere with their achievement".

This gigantic problem has created interest not only among the educationists alone, but it has aroused the interest of

conscious parents. Many failing children do have sufficient intelligence but are unable to progress. Wan[3] has drawn attention to the problem of failures and wastage. He reported that during the last decades attention has been focused not only on individual failures but on the failures of educational practice and system to inspire pupils. Only, one out of eight adolescent children in the age group 14-17 years reached secondary school. Though, high school population is, therefore, highly selective, yet 50 or more failure from the selective population is irksome. This does not indicate the wastage on money alone, but also of national manpower. India is a developing country and she can not ill-afford to waste human talent and the countries limited resources. It is the moral obligation of the country to provide help in enabling the adolescents to develop their capacities of which they are capable.

A thorough answer to these problem posed above has led the educationists and psychologists to the exploration of the factors associated with scholastic achievement of school children.

Statement of the Problem :

Every research on this subject focused primarily on intellectual and other factors of mental abilities as predictors. Recently, there have been an important shift in emphasis and in the conceptualization of the problem due to gradual

[4]

recognition that some students do better and some perform worse than predicted on the basis of ability tests. The search for cause of these variations in scholastic performance led first to the consideration of non-intellectual factors mainly personality characteristics, scholastic motivation, home environment, self concept, emotional adjustment, values, interests, attitudes, test anxiety and organizational climate etc. A large number of studies have been conducted which have shown that non-cognitive factors also play a significant role in the accomplishment of scholastic attainment. An important need in the prediction of scholastic attainment, therefore, is for systematic research into all these above non-cognitive factors and affective domains of human behaviour which are conducive to scholastic achievement. Though, this issue is a stupendous task requiring intensive and extensive study by a team of research workers working steadily over a number of years, yet the investigator has taken an humble venture to find out the relationship of the factors pertaining to pupil's personality and values with their scholastic achievement keeping in view the, shortage of time and money. Therefore, the problem undertaken for the present investigation is entitled as: *"A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS X".*

To be specific, the present study is intended to answer the following questions:

[5]

1. Are personality factors and values are associated with scholastic achievement?

2. Which personality factors are associated with scholastic achievement and in what manner?

3. What are the possible combinations of personality and values, on which prediction of academic achievement can be made at the highest level?

Objectives of the Study :

The major objectives of the present study were :

1. To find out the extent to which personality traits are related to academic achievement.

2. To find out how far values effects scholastic achievement.

3. To find out how far these variables(each personality characteristic and values) contribute to the prediction of scholastic achievement.

4. To compare the personality factors and values of high achievers and low achievers.

Subsidiary Aims :

In order to accomplish the above mentioned objectives, some concomitant objectives had also been realized :

1.   The investigator found the reliability and validity of all the tests used for the purpose of present research study.

2.   In order to get the true picture of the correlation between personality traits, values and scholastic attainment, age, sex, S.E.S. and intelligence factors had been controlled.

Rationale and Assumptions of the Study:

The present study is titled as : *"A STUDY OF THE EFFECT OF SOME OF NON-COGNITIVE FACTORS ON THE SCHOLASTIC ACHIEVEMENT OF GIRLS STUDYING IN CLASS X".* Obviously, it has been assumed that there must be significant relationship among these variables. Personality traits and values are surely a forceful determinant of human activities and achievement. The amount and quality of achievement in the different walks of life, are certainly the output of distinct organization of different traits of personality. Our unique composite of temperament traits, needs, interests, values, problems adjustment, attitudes, aptitudes, tests and talents decide our achievement not only in the academic field but in every field. Here the investigator is concerned only with the academic field.

Several efforts have been made from time to time to satisfy the query of finding out the non-cognitive factors that can be considered responsible for academic success and failure. Ultimately these factors which have deep impact on our academic attainment, are categorised under two major divisions:

(a) Personality factors.

(b) Non-Personality factors[4]

Non personality factors include age, teaching and learning method, study habits, biographical data, socio economic status, motivation and class room climate personal values and home environment etc., whereas in personality factors, we include temperament traits, interests, attitudes problems, adjustment, needs etc. These personality factors, influence our achievement far more deeply than non-personality factors.

It is common notion that some students, who fail in the school examination, obtain better scores on test of intelligence and some of the good achievers in earlier classes unexpectedly fail and lag behind the standards of achievement in next higher classes. It shows that the "primary operent" factor in academic achievement is not only intelligence but something more than this. For all this, the pupil's personality structure and values may be considered responsible without much hesitation. The personality factors and values have an important bearing on academic achievement.

Cain Leo F Michelis and Aurich[5] found that "The characteristics of adolescence place greater emphasis on pupils adjustment in terms of social and emotional factors and emotional factors and this leads to a wider use of .... measure of personality and values for achieving the factors associated with success and failure in secondary school".

[8]

These are mainly the personality traits and values that pull down the students of higher ability to a lower level and push up students with low ability to a higher level. So far as change in academic-achievement is concerned, it is due to the change in human behaviour, change in attitude, interest, mood, values and so on.

Thus, only after thoroughly understanding the individual's value and his/her complex personality traits, we are able to know the reasons of his under-achievement, which can be carelessness in utilizing the inner resources.

A study of causes of failures in the high school examination was made by the Department of Education of Allahabad University[6]. The study found that certain aspects of personality and scholastic achievement have definite relationship. The hypothesis of the study was "Causes of failure must be in some sort of weakness of, or lack of, adjustment on the part of the examinee".

A number of recent studies have drawn attention to personality and values correlates of school attainment. Cattell[7] (1966) has reported low but statistically significant correlations between pupil's achievement and scores on various personality traits. The association of personality characteristics with academic achievement after testing was also explained by Brishton[8] (1957) in the following words:

"Intelligence is a significant determiner of scholastic achievement, but many other personal, social, psychological and emotional factors affect the nature and extent of school achievement". The study of Barrett has shown the importance of personality and values in academic achievement :

"Only by careful and thorough study of each individual's personality we can find the reasons for under achievement. If the individual is under-achieving it is because he can not adequately utilize his inner sources".

Neugeboren[9] (1958) and Paul Centi[10] (1962) both studied that patterns of academic performance are related to certain aspects of personality structure. Cattell and Butcher[11] (1968), in one of study concluded that variance in academic achievement is equally divided among ability, motivation, personality factors, each of which accounts for about 25%.

James[12] (1952) while quoting a study, concluded that low achievers had less will to adjust, had developed less leadership ability, were more aggressive, liked school less and had lower educational aspiration than their high achieving peers. Burgess[13] (1956) found no differences in the anxiety index for the over and under achieving groups. Holland[14] (1960) noted that only high achieving girls were characterized by lack of tension and that the result was not valid for boys. According to Endler[15] (1960) anxiety had no direct and significant

relation with academic achievement but where the subjects were trichotomized into high, middle and low achieving groups, anxiety was found to increase the correlation between the predicted and actual grade average for high achieving groups and to decrease the correlation for the middle and low groups. In Spielberger's[16] study (1960) anxiety was found to facilitate the academic achievement of the higher ability groups only. Maling[17] (1964 noted that anxiety was responsible for greater variability in academic performance ,and that for high achieving group only.

Neuroticism, which is another personality variable studied in connection with achievement discrepancy, shows a similarly conflicting results. For Investigators like Eysenck[18] (1957), Lynn[19], Lynn& Gordan[20] (1961), good educational attainment was facilitated by neuroticism. But according to Savage[21] (1962) academic achievement and neuroticism were negatively related. Similar study was conducted in India by Mohanta[22] (1965) suggested that high achievers were, in general, less neurotic.

Personality traits and values do not give a consistent pattern in their association with the achievements of students. Investigators : V. Kolwadkar[23] (1980); N. Haq [24](1988); S.K. Dixit[25] (1989); G.S. Manon[26] (1990); B.D. Sati[27] (1991); Nisha[28] (1991); D.K. Diwan[29] (1991); S.K. Chand[30] (1992); N.M. Chhangan Lal[31] (1992); S. Gautam[32] (1992); Namrata[33]

[11]

(1992); K. Sen Barat[34] (1992); draw different pictures from the data they collected.

It is evident from the above mentioned studies that personality traits and values have got some sort of relationship with academic attainment. However, the result of most of studies are almost contradictory. Hence, more replication of studies in a comprehensive manner, in which the application of more sophisticated statistical technique for data analysis may be made in order to make interpretation more valid, are needed. There is a lack of such type of comprehensive studies in our country which may made interpretation more valid and meaningful so that some general conclusions about the dynamics of academic performance may be drawn. This is be the first comprehensive study in which the effect of personality traits alongwith personal values on academic attainment had been studied with the application of more sophisticated statistical technique for data analysis (partial 'r', multiple 'R', coefficient of Alienation, coefficient of Forecasting Efficiency),so that more valid interpretation had been made. There is a paucity of such type of studies so far to the best of researcher's knowledge which had been conducted in India till today.

These facts inspired the investigator to analyse the relationship of all sixteen personality traits and six values with the academic achievement of girls studying in class X systematically in a logical manner. Here, it would not be out

of the way to mention that almost all the studies which were carried out in our country regarding in this context, were on males.

Hypotheses :

Under this study, the following hypotheses in null form had been formulated :

1. **Personality and Academic Achievement :**

    (a) There is no significant correlation between personality characteristics and academic achievement.

    (b) The relationship of personality characteristics with academic achievement does not exist significantly when intelligence is held constant.

    (c) There is no significant relationship between personality characteristics and academic achievement when S.E.S. is held constant.

    (d) The significant relationship dos not exist between personality characteristics and academic achievement when intelligence and S.E.S. are held constant at a time.

2. **Academic Achievement and Values :**

    (a) There is no significant relationship between values and academic achievement.

(b) No significant relationship exists between values and academic achievement when intelligence is held constant.

(c) The significant relationship does not exist between values and academic achievement when S.E.S. is held constant.

(d) There is no significant correlation between values and academic achievement when intelligence and S.E.S. are held constant at a time.

3. Each personality characteristics and values when combined together do not predict significantly to the scholastic achievement.

4. The personality characteristics of high and low achievers do not differ significantly.

5. The high and low achievers do not differ significantly in their values.

Definition of Important Terms :

Many technical terms have been used in the present study and it is necessary to define them so that further discussion may be understood in the proper context.

Personality Factors:

Generally authors have defined personality in terms of factors or in terms of types. Stagner[35] (1961) uses the term factor to refer to a consistent feature of personality which has some emotional or ideational content. Personality variables are defined in terms of sixteen personality factors as measured by Sixteen P.F. Questionnaire of Dr. R.B. Cattell adopted in Hindi for adults by Dr. S.D. Kapoor. The brief description of these sixteen personality factors is as follows :

1. Factors 'A' : Reserved - Outgoing :

The person, who scores low on Factor A, tends to be stiff, cool, skeptical, and aloof. He likes things rather than people, working alone, and avoiding compromises of viewpoints. He is likely to be precise and 'rigid' in his way of doing thing and in personal standards, and in many occupations these are desirable factors. He may   tend, at times, to be critical, obstructive, or hard.

The person, who scores high on factor A, tends to be good natured, easy-going, emotionally expressive, ready to cooperate, attentive to people, soft-hearted, kindly, adaptable. He likes occupations dealing with people and socially impressive situations. He readily forms active groups. He is generous in personal relations, less afraid of criticism, better able to remember names of people.

2. Factor 'B' : Less Intelligent - More Intelligent:

The person, scoring low on Factor B, tends to be slow to learn and grasp, dull, given to concrete and literal interpretation. His dullness may be simply a reflection of low intelligence, or it may represent poor functioning due to psychopathology.

The person, who scores high on Factor B, tends to be quick to grasp ideas, a fast learner, intelligent. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

3. Factor 'C' : Affected By Feelings - Emotionally Stable :

The person, who scores low on Factor C, tends to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic evading necessarily reality demands, neurotically fatigue, fretful, easily emotional and annoyed, active in dissatisfaction, having neurotic symptoms. Low Factor C score is common to almost all forms of neurotic and some psychotic disorders.

The person, who scores high on Factor C, tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. Sometimes he may be a person making a resigned adjustment to unsolved emotional problems.

[16]

4. Factor 'E' : Humble - Assertive :

The person, who scores low on Factor E, tends to give way to others, to be docile, and to conform. He is often dependent, confessing, anxious for obsessional correctness. This passivity is part of many neurotic syndromes.

The person, who scores high on Factor E, is assertive, self-assured, and independent-minded. he tends to be austere, a law to himself, hostile or extra punitive, authoritarian, and disregards authority.

5. Factor 'F' :Sober- Happy-go-lucky :

The person, who scores low on Factor F, tends to be restrained, reticent, introspective. He is sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. He tends to be a sober, dependable person.

The person, who scores, high on this factor, tends to be cheerful, active, talkative, frank, expressive, effervescent, carefree. He is frequently chosen as an elected leader. He may be impulsive and mercurial.

6. Factor 'G' : Expedient - Conscientious :

The person, who scores low on Factor G, tends to be unsteady in purpose. He is often casual and lacking in effort for group undertakings and cultural demands. His freedom from group influence may lead to anti-social acts, but at times makes

him more effective, while his refusal to be bound by rules causes him to have less somatic upset from stress.

The person, who scores high on Factor G, tends to be exacting in character, dominated by sense of duty, persevering, responsible, planful, "fills the unforgiving minute". He is usually conscientious and moralistic, and he prefers hard working people to witty companions. The inner "Categorical imperative" of this essential superego should be distinguished from the superficially similar "social ideal self" of Q_3.

7. Factor 'H' : Shy - Venturesome :

The person, who scores low on this factor, tends to be shy, withdrawing, cautious, retiring, a 'wall-flower". He usually has inferiority feelings. He tends to be slow and impeded in speech and in expressing himself, dislikes occupations with personal contacts, prefers one or two close friends to large groups, and is not given to keeping in contact with all that is going on around him.

The person, who scores high on Factor H, is sociable, bold, ready to try new things, spontaneous, and abundant in emotional response. His "thick-skinnedness" enables him to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, he can be careless of detail, ignore danger signals, and consume much time talking. He tends to be "pushy" and actively interested in the opposite sex.

[18]

8. Factor 'I' : Tough-minded-Tender-minded :

The person, who scores low on Factor I, tends to be practical, realistic, masculine, independent, responsible, but skeptical of the subjective, cultural elaborations. He is sometimes unmoved, hard, cynical, smug. He tends to keep a group operating on a practical and realistic "no-nonsense" basis.

The person, who scores high on Factor I, tends to be tender-minded, day- dreaming, artistic, fastidious, feminine. He is sometimes demanding of attention and help, impatient, dependent, impractical. He dislikes crude people and rough occupations. He tends to slow up group performance and to upset group morale by unrealistic fussiness.

9. Factor 'L' : Trusting - Suspicious :

The person, who scores low on Factor L, tends to be free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about other people, a good team worker.

The person, who scores high on Factor L, tends to be mistrusting and doubtful. He is often involved in his own ego, is self-opinionated, and interested in internal, mental life. He is usually deliberate in his actions, unconcerned about other people, a poor team member.

10. Factor 'M' : Practical - Imaginative :

The person, who scores low on Factor M, tends to be anxious to do the right things, attentive to practical matters, and subject to the dictation of what is obviously possible. He

is concerned over detail, able to keep his head in emergencies, but sometimes unimaginative.

The person, who scores high on Factor M, tends to be unconventional, unconcerned over everyday matters, Bohemian, self-motivated, imaginatively creative, concerned with "essentials", and oblivious of particular people and physical realities. His inner-directed interests sometimes lead to unrealistic situations accompanied by expressive outbursts. His individuality tends to cause him to be rejected in group activities.

11. Factor 'N' : Forthright - Shrewd :

The person, who scores low on Factor N, tends to be unsophisticated, sentimental and simple. He is sometimes crude and awkward, but easily pleased and content with what comes, and is natural and spontaneous.

The person, who scores high on Factor N, tends to be polished, experienced, worldly, shrewd. He is often hardheaded and analytical. He has an intellectual, unsentimental approach to situations, an approach akin to cynicism.

12. Factor 'O' : Placid - Apprehensive :

The person, who scores low on Factor O, tends to be placid, with unshakable nerve. He has a mature, un anxious confidence in himself and his capacity to deal with things. He

is resilient and secure, but to the point of being insensitive of when a group is not going alongwith him, so that he may evoke antipathies and distrust.

The person, who scores high on Factor O, tends to be depressed, moody, a worrier, full of foreboding, and brooding. He has a child like tendency to anxiety in difficulties. He does not feel accepted in groups or free to participate. High Factor O score is very common in clinical groups of all types.

13. Factor $'Q_1'$: Conservative - Experimenting :

The person, who scores low on Factor Q_1, is confident in what he has been taught to believe, and accepts the "tried and true", despite in consistencies, when something else might be better. He is cautious and compromising in regard to new ideas. Thus, he tends to oppose and postpone change, is inclined to go along with tradition, is more conservative in religion and politics, and tends not to be interested in analytical "intellectual" thought.

The person, who scores high on Factor Q_1, tends to be interested in intellectual matters and has doubts on fundamental issues. He is skeptical and inquiring regarding ideas, either old or new. He tends to be more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change.

14. Factor 'Q$_2$' : Group-Dependent-Self-Sufficient:

The person, who scores low on Factor Q$_2$, prefers to work and make decisions with other people, likes and depends on social approval and admiration. He tends to go along with the group and may be lacking in individual resolution. He is not necessarily gregarious by choice; rather he needs group support.

The person, who scores high on Factor Q$_2$, is temperamentally independent, accustomed to going his own way making decisions and taking action on his own. He discounts public opinion, but is not necessarily dominant in his relations with others. He does not dislike people but simply does not need their agreement or support.

15. Factor 'Q$_3$' : Undisciplined Self-Conflict-Controlled :

The person, who scores low on Factor Q$_3$, will not be bothered with will control and regard for social demands. He is not overly considerate, careful, or pains-taking. He may feel maladjusted, and many maladjustments show Q$_3$.

The person, who scores high on Factor Q$_3$, tends to have strong control of his emotions and general behaviour, is inclined to be socially aware and careful, and evidences what is commonly termed "self-respect" and regard for social reputation. He sometimes tends, however, to be obstinate. Effective leaders, and some paranoids, are high on Q$_3$.

16. Factor 'Q$_4$' : Relaxed - Tense :

The person, who scores low on Factor Q$_4$, tends to be sedate, relaxed, composed, and satisfied. In some situations, his over satisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error. Conversely, high tension level may disrupt school and work performance.

The person, who scores high on Factor Q$_4$, tends to be tense, excitable, restless, fretful, impatient. He is often fatigued, but unable to remain inactive. In groups, he takes a poor view of the degree of unity, orderliness, and leadership. His frustration represents and excess of stimulated, but undischarged, drive.

Values :

In the present study, students values are defined as "what the students think important in life". Six important values have been selected in order to relate them to the students' academic achievement. To measure these six values-personal, religious, educational, materialistic, social and humanistic-a scale of values has been used by the researcher. These values are described as follows :

1. **The Personal Values :**This refers to the dominant feelings of hedonism, self-interest, self-development, recreation and show off.

2. **The Religious Values :** This refers to the interest in religious books, religious activities and ritual work. Interest in moral and spiritual development, interest in religious people etc. are also indicative of the religious values.

3. **The Educational Values :** The educational values refer primarily to the interest in education. Most of the activities of a person having these values are confined to the narrow field of education. He craves for higher learning and wants to be a good, able and laborious student.

4. **The Materialistic Values :** The student having more dominant materialistic values is characteristically interested in 'what is useful in life'. He has a good desire for money and most of his activities are dominated by this desire. He is mainly interested in business, prosperity and accumulating wealth. He wants education to be of practical use.

5. **The Social Values :** This refers to love for the people consideration for other persons, to be unselfish, sympathetic and kind to others. A person having dominant social values consider relationship more important. Such a person is interested in social work and social reforms, helping the poor. He also tries to cooperate with others.

6. **The Humanistic Values :** This refers to love for humanity, helping the needy, to be kind hearted, sympathetic, sacrificing and others oriented.

Scholastic Achievement:

The aggregate marks obtained in high school examination of U.P. Board Allahabad by the female students has been accepted as the criterion of students' scholastic achievement.

High Achievers :

The term high scholastic achievers for the purpose of present study refers to the subjects earning a total score in high school examination which above mean+1S.D. for the score distribution for scholastic achievement. The subject who have scored more than 65% marks have been named as high achievers.

Low Achievers :

The term low achievers refers to the subjects earning a total score in high school examination which is below mean - 1S.D.for the score distribution of scholastic achievement. Subjects getting less than 45% of the marks, have been named as low achievers.

Socio-Economic Status :

Good in his dictionary Education describes the meaning of Socio-economic status as "The level indicative of both social and economic achievement of an individual or group".

Kuppu Swami has regarded occupation, income and education as the factors in socio-economic status.

Under the present Indian conditions the S.E.S. scale Form A Urban and Form B Rural constructed and standardized by Dr. S.P. Kulshreshtha have been used by the investigator. It seeks the information regarding the following component variables :

1. Parental and Sibling's Occupation.

2. Parental and Sibling's General Education.

3. Parental and Sibling's Technical Education.

4. Economic Indicators.

5. Cultural Indicators.

6. Psychological Indicators.

The comparisons of all these six areas constitute the concept of S.E.S .in present study.

Intelligence :

S.S. Jalota Group Test of General Mental Ability 1972 (J.G.T.M.A.) for 11 to 16 years students in order to measure the intelligence had been used by the researcher for the present study.

Delimitations of the Study :

The present study is limited to a random sample of 1200 female students studying in class X of girls Intermediate colleges of Chitrakoot Dham Mandal. Hence, there results obtained and the inferences drawn would be relevant to the female students of Chitrakoot Dham Mandal only.

The study is limited only to the measurement of sixteen primary personality factors(First order factors), alongwith six values which have been described earlier in this chapter. Eight second order factors which can also be identified with the help of this R.B. Cattell test, have not been measured in this study.

This investigation is confined to the female students only. Boys are not the subjects of the study. This was done to control the sex variable in personality otherwise the combined results would not have been valid.

The present study is also limited in research design. This is a survey type study which builds a body that is usually only of logical significance and may contribute to the solution of immediate problems. It is, therefore, not likely to produce direct evidence of any casual relationship.

This investigator has confined the present study in design also. Several other designs in which more than second order partial correlation, factor analysis and an experimental design could have been used. But due to the limited resources and

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paucity of time and money only, the normative survey method and a few statistics have been used.

In the present study total marks of all the subject in high school examination of U.P. Board, Allahabad has been considered as the criterion of students' scholastic achievement.

The sample is limited only to those schools where the medium of instruction was Hindi.

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CHAPTER-II

CHAPTER - II

Review of Related Literature :

The review of research literature pertaining to the problem revealed that a thorough search for factors of academic achievement has been made during the past fifty years. As far as known to the investigator, this is the first and comprehensive study in which an attempt has been made to explore the various personality characteristics along with values influencing academic achievement. A number of studies and investigations have been made, particularly in the U.S.A. and the U.K., on the role of personality factors in predicting the success and failures in secondary school. Values as related to academic achievement has failed to draw the attention of educational researchers. Only a few studies are available on values.

A further review of the related literature or studies would bring to light the aspects of personality which have been studied in relation to academic achievement and which ones have remained unexplored. This would explain the importance and necessity of the present study.

The existing researches that are directly and indirectly related to the present study may conveniently be divided into five segments.

1.   Intellectual Factors

2.   Environmental, Biographical and S.E.S. Factors

3.   Personality Factors

4.   Values Factors

5.   High & Low Achievers

1.   Intellectual Factors as Predictors of Academic Achievement :

Studies that use intellectual factors to predict the academic achievement are in abundance. Extensive data are available regarding tests of general intelligence and differential ability as related to scholastic achievement.

First of all the investigator would like to review global measures of ability and performance. Cronbach[1] has reported one study in which correlation between intelligence and grades was .55. Traverse[2] found that correlations between intelligence and grades range between .50 and .75 on the eight to tenth grade levels. Gough[3] obtained correlations which range from.62 to .80 with three samples of high school seniors, and Friedhoff[4] obtained and correlation of .44 with an eighth grade sample. Carter[5] found correlation about .60 for three samples and Jacob[6] obtained similar results. Nason[7] observed correlations of .34 for boys and .39 for girls, using intelligence as a predictor of grades. These last correlations are lower than for the other sample, probably because of the narrow intelligence

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distribution of the sample. These studies suggest that for the High school level, ability and grades are correlated at about .60. This is some what higher than the findings for the college level where the average correlation is about .50. Lavin[8] remarks that "In all probability this is primarily due to the wider range of ability on the high school level. On the college level, admission procedures tend to eliminate those of low ability. As the ability range becomes narrower correlations with performance are likely to decrease".

In a study (that used a battery of Predictors) Wellman[9] found a multiple correlation of about .80. The general and possible conclusion that can be drawn from the other studies[10,11], that correlation between ability and school or college averages run between .40 and .50. It is a rough but fair generalization.

Bhatnagar[12] quoting Froehlich and Hoyt says that when the measures of mental ability and achievement as measured by standardized tests are correlated, co-efficients can be expected to range from .30 to .80, most of them at or near .55, the middle of the range.

A study was conducted by V. Jha[13] in which academic achievement in Science has been found significantly correlated with general intelligence.

2. Environmental, Biographical and S.E.S. Factors as Predictors of Academic Achievement :

It appears from a number of investigation that some environmental characteristics may also explain the discrepancies between aptitude and achievement. Thus Campbell[14] (1952)observed that certain aspects of the home background(Socio cultural aspects consisting of social activities, cultural objects in the home and the cultural values and attitude of parents) greatly affected secondary school achievement. Kemp[15](1955) also found attainment to be related to socio-economic status. Klausmier[16] (1958) compared certain physical, behavioural and environmental characteristics of high and low achieving students and observed that two environmental factors were different for the two groups. One was the parental occupation and the other was the sex ratio in the class. Duff and Seigel[17] (1960) observed a negative relationship between effective utilisation of academic ability on the one hand and a degree of participation in physical, social and hetrosexual activities on the other. Hunt[18] (1961) tried to explore fourteen characteristics including age, parental education, number of elder brothers and sisters, number of younger brothers and sisters, age and occupational level of parent or guardian etc. But none of these factors showed a significant difference between over and under achievers.

Dugan[19] (1962) obtained a relation between the educational tradition of the family and success at school. Street,

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Powell and Hamblen[20] (1962) concluded that the larger school tended to produce higher achievement level. Watson's[21] attempt (1965) to predict achievement with the help of several(family) background variables showed that excepting father's educational level, none of the variables was related to scholastic academic achievement.

In a stratified society, as that in India, a researcher is apt to start with a hypothesis that S.E.S. contributes to academic performance. In one of the studies Mathur[22] (1963) has studied the effect of S.E.S. on behaviour and achievement of secondary school students. He has noted that S.E.S. is significantly correlated to educational achievement, Intelligence and conduct of student. In his study Chopra[23] (1964) has examined the relationship between S.E.S. factor and academic achievement keeping the effect of intelligence constant. He has found that nearly ninety six percent of students who discontinued education attribute the reason to poor economic condition of the family. On the basis of parents education, occupation family income, type of lodging] size of the family and cultural level of home, students belonging to higher qualitative group show significantly higher achievement.

3. Personality Factors as Predictors of Scholastic Achievement :

Harris[24] has published review of 147 studies conducted prior to 1930. In many of these studies an attempt was made

to correlate selected personality characteristics of students with their school/college grades. Harris found that the findings up to that time had been conflicting and inconclusive.

Another survey of such literature was published by the same author in 1940, in which 328 studies of scholastic prediction conducted mostly between 1930 and 1937 were reviewed[25]. From review of these studies Harris concluded that in order of importance of the factors of achievements were (a) ability (b) efforts and (c) circumstances (personal, social, economic, academic) and (d) some personality factors, were found related to scholastic achievement in some ways. He found that coefficient of correlation (r) was .57.

A study conducted by Taylor[26] revealed rating on A.C.E., personality correlated .40 with scholarship, raising multiple R with intelligence and high school grades from .47 to .73.

A personality scale measuring introversion was used to predict grades in some studies. Stalnaker[27], and Fleeming[28] found that the grade differences between the two extreme groups on this scale were significant. But in other three studies[29,30,31] the same scale correlated Zero or practically so with scholarship. The Pressey X-O test also was found to be having no relationship with grades. Using the Questionnaire device, it was concluded in several studies[32, 33] that what is called introvert behaviour is associated with grades than its opposites.

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In 1949 Garrett[34] mentioned about 63 studies in which personality factors were studied as predictors of scholastic achievement. The reported correlation of these factors with college grades varied between 0.30 and 0.64

Jane Beasley[35] published in 1957 a review of literature related to research on under achievement. Interesting and more convincing finding have been reported in this brochure regarding personality factors causing under achievement.

E.Mar Jorie, Ainsworth[36] conducted a study from which they concluded that none of the further personality factors correlated significantly with intelligence, with the exception of factor, which is also a measure of intelligence, conscientiousness and self sufficiency were the most promising factors as predictors of school attainment. Another study conducted by R.D. Savage[37] revealed that neuroticism and introversion scores on the Maudsley personality inventory are significantly related to academic performance. The positive association between neuroticism and academic failure does not follow the results of (Funneauth 1951) (Lynn 1959) and others.

In 1968, Cattell and Butcher[38] in their publication suggested that variance in academic achievement is equally divided among ability, motivation, personality factors, each of which accounts for about 25%. The result of the study indicate that some specific areas of achievement seems to have their

own unique set of personality traits associated with them. Thus for example achievement in mathematics is significantly,(P.05) correlated with factor H (adventurousness) in both the 6th the and 7th class grades and also with factor E (Dominance) (P.05), tough mindedness (P.01) and J (Individualism) in the 7th grade. For the most part, however, when a personality factor significantly predicts achievements, it does so ever all most of the four separate areas of social studies, science, mathematics and reading.

James[39] while quoting a study, reported that variability in achievement among equally able students could be accounted for in-terms of different degrees of adjustment and in differing degrees of ability and willingness to adjust to the demands of school situation. It was concluded that low achievers had less will to adjust, had developed less leadership ability, were more aggressive, liked school less and had lower educational aspiration than their high achieving peers.

Burgess[40] (1956) found no differences in the anxiety index for the over and under achieveing groups. Holland[41] (1960) noted that only high achieving girls were characterized by lack of tension and that the result was not valid for boys. According to Endler (1960) anxiety had no direct and significant relation with scholastic achievement but where the subjects were trichotomized into high middle and low achieving groups, anxiety was found to increase the correlation between

the predicted and actual grade average for high achieving groups and to decrease the correlation for the middle and low groups. In Spielberger's[42] study (1960) anxiety was found to facilitate the scholastic achievement of the higher ability group only. Maling[43] (1964) noted that anxiety was responsible for greater variability in scholastic performance, and that for high achieving group only.

Neuroticism, which is another personality variable studied in connection with achievement discrepancy, shows a similarly conflicting results. For investigators like Eysenck[44] (1957) Lynn[45], Lynn & Gordan[46] (1961), good educational attainment was facilitated by neuroticism. But according to Savage[47] (1962) scholastic achievement and neuroticism were negatively related. Similar study was conducted in India by Mohanta[48] (1965) suggested that high achievers were, in general, less neurotic.

Wright[49] (1955) succeeded in predicting under achievement by means of the scale of the junior-senior high school personality Questionnaire. Butcher et. Al[50] (1963) using the same tool observed that thirteen variables of the Questionnaire were correlated with scholastic achievement. Ridding[51] noted significant differences between over and under achieving students on three scales of the questionnaire, viz. dominance, surgency and conscientiousness.

The majority of the reported studies appear to have made what may be called a test oriented approach. In other words, the investigators have tried to ascertain how far factors measured by a certain test can discriminate the two groups. In many cases such test have been chosen arbitrarily and the rationale guiding this choice is missing in the report. Here an attempt has been made in the following pages to review some of the previous methods of researches and their findings.

P.A. Abraham[52] attempted to determine the influence of the basic personality factors on scholastic achievement. As a result boys were found to be significantly superior to girls on several achievement variables so the data obtained for boys and girls were factors analysed separately. It was found that factor analysis of personality variables and scholastic achievement involved a factor pattern in which three factors could be identified, viz., scholastic aptitude, neuroticism and extroversion introversion.

Bhatnager[53] has also shown the personality factors in terms of need effect scholastic achievement. Age, sex and intelligence were constant. Male students of class XI of Rajasthan formed the sample of the study of the 1941 students, 912 belonged to humanities group, 476 to commerce, 553 to Science group. Bhatnagar reported in his one of the study that the need for autonomy, interception, succurrance, dominance nuturance, endurance and aggression correlate positively and

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need defence, affiliation and abasement correlate negatively with scholastic achievement.

H.K. Mishra[54] in his study "Personality Factor in High and Low Achievers in Engineering Education", has reported that high and low achievers do not show significant differences in general mental ability excepting in factors such as anxiety, judgment, neuroticism, morality and sense of responsibility.

Gopal Rao[55] has also drawn conclusion from his "Study of some Factors Related to Scholastic Achievement", that certain personality factors affect scholastic achievement of VIII class students. Singh[56] in his study found the intelligence and some of the personality factors namely emotional maturity, persistence, efficiency, sociability and general adjustment are positively correlated with scholastic achievement. He concluded that prediction based on these positively correlated personality factors was 29% and when these factors were combined with intelligence the determined variable was 33.6%

N.P. Banerjee[57] aimed at making a comparative study of four types of basic and non basic schools in respect of their scholastic achievement and some aspect of personality development. The difference in respect of their personality development has not been found to be significant.

Studies which have tried to probe into the relationship of certain personality factors with achievement during 1978 to

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1983 are those of Mukherjee (1979),Dhami (1974), Bhushan and Ahuja (1977), Ravindra (1977), Singh and Kumar(1977), Goswami (1978), Shah (1978), Hom Chaudhary (1980), Shivappa (1980),Kumar (1981), Patel(1981), Menon (1982) and Zachariah (1983).

Singh and Kumar[58] (1977) and Bhushan and Ahuja[59] (1977),while inquiring into the relationship of anxiety and achievement came to the same conclusion. The former carried out their study on male graduate students measuring anxiety during their graduation and considering the previous examination marks as the index of their achievement. The later carried out their study on in-service teachers with a maximum of three years of experience, all persuing M.Ed. through correspondence course. Both the studies found anxiety to have a negative relationship with achievement.

Mukherjee[60] (1979) demonstrated the importance of controlling the differences between the anxiety groups with regard to a number of ability and self evaluation variables when prediction of scholastic achievement was to be made from non-intellectual factors. Ravindra[61] (1977) used a variety of tools in his attempt to find out the effects of state factors anxiety, psychological stress and intelligence on learning and scholastic achievement. The data were analysed using the statistical techniques of analysis of variance and factor analysis. The study found that general anxiety by itself had

relatively little effect on scholastic achievement and that a combination of anxiety with intelligence considerably increased the accuracy of predicting scholastic performance. In his study involving pre-university students drawn from all colleges of Mizoram.

Home Chaudhri[62] (1980) inferred that three factors self concept anxiety and S.E.S., came out as correlates of scholastic achievement. In yet another study using college student as sample, Hussain (1977)[63] concluded that anxiety was found to bear a curvilinear relationship with scholastic achievement.

Though, self concept has been studied as one of the many variables in a number of investigation, Shah (1978) Goswami and Sharma studied it as a major variables and looked into its relationship with achievement. In all the three above studies it was found that self concepts have a positive relationship with scholastic performance.

There is a single experimental study by Kumar[64] (1981) which considered the achievement of students through programmed instruction. The researcher has suggested the suitability of different programming styles in relation to the variables - general anxiety, extroversion, intelligence, and creativity.

Fantasy life of adolescent girls caught the attention of Zachariah[65] (1982). The investigator developed a fantasy

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inventory and collected data on large sample of adolescents girls in Kerala. The study found the relationship between the fantasy life and educational achievement to be significantly negative.

4.   Values and Scholastic Achievement :

Value is important in the learning process because it influences selection of the stimuli to which the learner responds ,the rapidity of learning, retention of the learned response, and application of the learned materials. Theoretically, one's values must constitute an important source of behavioural motivation. School learning is also an aspect of behaviour. In few researches in India and abroad attempts have been made to analyse the relationship between values and academic performance of the students.

Cattell, Sealey and Sweney[66] made a study on the basis of which they generalized that value patterns operated strongly in the interaction of pupils and teachers and hence it was quite reasonable to think that pupils patterns of values were related to the level of pupils school learning. Walker[67] worked on values and found that the students of high scholastic achievement expressed higher traditional values than those of low scholastic achievement. Thomson[68] revealed that the grades earned by the students appeared to be related to personal values and the students making the highest grades to be those with emergent kinds of values.

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Coleand Miller[69] conducted a study on male and female college students and concluded that academic achievement is significantly related to the values of students.

Hapner[70] made an attempt to examine if success and failure of divergent ethic groups can be related to discrepancies in values between them and the schools in which they are expected to function. The investigation uncovered significant differences in values between Maxican-American and Anglo-American boys which influence their educational behaviour and achievements. In his comparative study, Gumeson[71] found that high creative group of male scored high social and religious values.

Bellucci[72] revealed that none of the values was significantly related to scores obtained by the trainees in nursing training programmes. Leadership was the only value giving significant correlation with completion of the practical nursing programme.

Soble[73] conducted a study on students value change and congruency with faculty values in professional education. The findings demonstrated that there was no significant academic differences between students who were congruent and non-congruent with faculty.

In the present study, the researcher has attempted to analyse the relationship of values with academic achievement of girls studying in class X.

5.   High Achievers & Low Achievers :

It is of extreme importance to educators in general and teachers in particular, to know why some students achieve high while others achieve low in the same school environment. Thirteen studies fall under this classification during 1978-83 which are cited in Third Survey of research in Education edited by M.B. Butch, Published by N.C.E.R.T., New Delhi. They are of Menon (1972), Agarwal (1975),Jain (1975), Ghuman (1976), Iyer (1977),Patel and Joshi (1977), Koul (1978), D. Joseph (1979), Nagpal (1979), Saun (1980), Somasundaram (1980), and Kulshrestha (1981). All these have attemped to compare over and under-achievers on certain personality and other characteristics.

Jain[74] (1975) found that bright achievers were characterized by better study habits and higher achievement motivation than the dull achievers. Agrawal[75] (1975) who made a psycho-social study of scholastic under-achievement concluded that under-achievers were comparatively less emotionally mature, less calm, less placid, less prone to getting into difficulties, less able to face reality and possessing less ego strength than over-achievers.

Menon[76] (1972) made a comparative study of over and under-achievers of high ability on certain personality characteristics, motivational factors, interest areas, etc Over-achieving groups of superior and general ability were found to

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be less extrovert and less maladjusted than under-achievers. The former also showed greater scholastic interest and endurance. Further, it was found that demographic factors and S.E.S. markedly influenced over and under achievement

Another study which again concentrated on patterns of achievement among bright students was of Kulshrestha[77] (1981), who worked on a sample of science and mathematics students from colleges. The results brought forth the differences in the area of vocational interests, certain personality characteristics, and some home factors for the differentially classified achievers in different subjects of study.

Koul [78](1978), Iyer[79] (1977),and Soma Sundram[80] (1980) conducted studies on under or over achievement in mathematics. Koul studied the differences on Murray's needs. He found that low achievers in mathematics were found to be more exhibitory succorant, heterosexual and aggressive than the high achievers. In the study of Iyer the personality variables self reliance, sense of personal freedom, feeling of belonging, withdrawing tendencies, nervous symptoms, social skill school relations, general anxiety and test anxiety discriminated effectively between over achievers and normal-achievers, normal-achievers and under-achievers, and over-achievers and under-achievers in relation to achievement in mathematics. While in the study of Somasundram, personality variables of social standards, introversion, family relations, social skills,

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general anxiety, school relations, self reliance, masculinity, anti-social tendencies (freedom from) and nervous symptoms (freedom from) were discriminated between unselected groups of over-achievers and under-achievers.

Variables which discriminated between the unselected groups of normal and under-achievers were social standards, introversion and family relations. In the case of equated groups variables which showed significant discrimination between normal and underachievers pertained to sense of personal worth, intro-version, and social standards.

The study of Ghuman[81] (1976) showed that over-achievers did not differ significantly on any of the variables, namely, aptitudes achievement motivation, or personality factors. The study attributed over-achievement primarily to non-intellective personality variables, and under- achievement to intellective factors.

Nagpal[82] (1979) made a study of non-intellectual characteristics of over or under-achieving engineering students. The study revealed that academic adjustment was an important correlate of over-or under-achievers. Further, under-achievers reported a greater number of emotional problems typical to youth.

Saun[83] (1980) studied the patterns of self disclosure and adjustment among high and low achievers. Male high and low

[49]

achievers equally disclosed their self to others in all the eight dimensions of self-disclosure inventory, namely, money, personality, study, body, interests, feeling ideas, vocation, and sex while among female high and low achievers, significant difference was found in self disclosure in relation to five areas namely, money, body, interests, feeling ideas, and sex. Regarding adjustments male high achievers were found to be more adjusted than low achievers in the areas of home and health, while there was a significant difference between high and low-achieving female, in health, social emotional and educational areas of adjustment. In Patel and Joshi's (1977) study, high achievers were found to have scored high on family adjustment than low achievers. Also the former were found to be better adjusted personally than the latter.

Joseph[84] (1979) in his study found that variables like number series, formulation spatial ability verbal comprehension and interpretation, critical thinking, attitude towards science, science interest, personal adjustment and low achievers.

Conclusion :

Summing up, it can be said that in earlier section the studies of personality factors and values as predictors of scholastic achievement have muddled the water. It is very difficult to draw common conclusion. The diversity in results may be considered responsible due to the following reasons:

1. Use of wide variety of tools

2. Use of tools which are not perfectly valid measures of personality factors.

3. Heterogeneous groups of subjects with regard to characteristics like age, ability, religion, classes school climate etc.

4. Inadequate control of correlated variables.

5. Inability to define personality factors in a particular field more precisely and exactly.

6. Application of diverse methods of identifying under and over achievers.

7. Inherent weaknesses of the test of significance.

These points have been kept in mind in planning of the present study. It is impossible to control all these factors in any single research. There is a considerable paucity of researches attempting to study the effect of personality factors and values of female students on their scholastic achievement. Hence,0 the investigator has made an attempt to conduct the present study.

Present Study :

The review of research literature related to the problem presented in the foregoing pages indicates that there are very few studies in which such large number of variables like age, sex, S.E.S. and intelligence have been controlled for predicting

[51]

academic performance on the basis of personality characteristics along with values. Thus the present study departs from the previous investigations in that :

1. The present study covers a large sample on the basis of which definite conclusions can be drawn.

2. The Indian adaptation of sixteen P.F. questionnaire a standardized test which includes a wide variety of personality characteristics has been used.

3. In the research design sex, age, S.E.S, and intelligence have been controlled, and different combinations of personality characteristics along with values have been researched as the predictors of academic achievement.

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CHAPTER-III

CHAPTER - III

Research Design of the Study :

The research problem was discussed in the preceding chapters. In the present chapter, the sample, the variables and the statistical procedures involved in the study have been discussed under the following heads :

1. Method of Study

2. Population and Sample

3. Tools Used

4. Variables Involved

5. Collection of the Data

6. Organization of the Data

7. Statistical Techniques Used

1. Method of the Study :

As already discussed in the preceding chapters, researches in this area have employed different methods of study for investigating the relationship of personality factors with scholastic attainment. It will be difficult to say which of them is most appropriate method, as every one has its own merits and demerits. Moreover, it cannot be said that the research methods used in one study are superior or inferior to those used in other researches. This made the choice of research

method difficult. Methods of research are sometimes determined by the theory of the topic under study, objectives of the study resources of the investigator etc. All these considerations have led the investigator to use the normative survey method of research in the present study. In the present investigation all the steps and characteristics have been followed which are essential for the normative survey method of research.

2.   Population and the Sample :

All the students of Class X, studying in various girls intermediate colleges of Chitra Koot Dham Mandal constituted the population of this study. The study was confined to the female students only. Male students were not included in the population, because personality factors of males are likely to differ widely from those of females. Hence, the two sexes need separate studies. Thus, the results will be applicable to only female population.

The sample was selected so as to match the study and help in achieving the purposes of the study Chitra Koot Dham Mandal consists of four districts, i.e. Banda, Chitrakoot, Hamirpur and Mahoba.

The target of sampling procedure was to select the random representative sample of the girls of X class studying in various high schools and intermediate colleges of above mentioned four districts of Chitra Koot Dham Mandal.

[62]

A survey was made to find out the ages of X grade students and it revealed that no one was less than fifteen year's old. Few of them were older than 18 years. Hence it was decided to include the pupils of the age range 16 to 17 years in the sample.

In all a sample of 1200 girls students from humanities, commerce and science streams was used in the study. The table No. 3-1 represents the distribution of cases from each schools.

TABLE 3.1

STREAM WISE DISTRIBUTION OF THE SAMPLE

S.N.	Name of the School	No. of students
1.	G.G.I.C. Banda	155
2.	A.K.I.C. Banda	52
3.	B.P. Omar Vaishya I.C. Banda	40
4.	G.G.I.C. Attara (Banda)	70
5.	G.G.H.S.S. Baberu (Banda)	29
6.	G.G.H.S.S. Kamasin (Banda)	15
7.	Nagar Palika Girls Inter College, Banda	15
8.	Fatma Girls Secondary School, Banda	10
9.	G.G.I.C. Karvi (Chitra Koot)	80
10.	G.G.I.C. Manikpur (Chitra Koot)	70
11.	G.G.I.C. Rajapur (Chitra Koot)	90
12.	G.G.I.C. Modha (Hamirpur)	60
13.	G.G.I.C. Hamirpur	95
14.	G.G.I.C. Rath (Hamirpur)	94
15.	G.G.H.S.S. Sumerpur (Hamirpur)	10
16.	G.G.I.C. Kurara (Hamirpur)	12
17.	G.G.H.S.S. Sisolar (Hamirpur)	05
18.	G.G.H.S.S. Gohand (Hamirpur)	09
19.	Hiranand Balika H.S.S. Vivar (Hamirpur)	06
20.	G.G.I.C. Mahoba	100
21.	G.G.I.C. Charkhari (Mahoba)	103
22.	G.G.H.S.S. Panwari (Mahoba)	30
23.	G.G.H.S.S. Kulpahar (Mahoba)	25
24.	G.G.H.S.S Jaitpur (Mahoba)	17
25.	B.S. Balika Inter College Kabrai, Mahoba	08
	Total	**1200**

Tools Used :

The following tools were included in the Battery :

a- 16 P.F. Questionnaire by Dr. R.B. Cattell, an Indian adaptation by Dr. S.D. Kapoor, Form-C for the assessment of personality factors.

b- Personal Value Questionnaire, constructed by Dr. Shanta Kumari Agarwal, revised and standardized by Dr. P. Singh for the assessment of values (PVQ).

c- S.E.S. scale Form A (urban) and form B (Rural) constructed and standardized by Dr. S.P. Kulshrestha.

d- S.S. Jalota Group Test of General Mental Ability 1972 (JGTMA).

The details of aforesaid tests have been discussed in following pages.

3(a) Assessment of Personality Factors :

Generally there are two models for assessing the personality namely- the concept of 'type' and 'factors', All port, Thorpe and Schmuller, Stanger,Hathway and Mckinly, Guilford, Zimmerman, Lovell, Lerry and Cattel attempted to analyse personality into factors for special investigation. Many of them have constructed omnibus personality inventories aiming at measuring different factors of personality. Dr. Cattell sixteen P.F. questionnaire has been used by a large no. of researchers.

[64]

Hence, it has been considered for measuring the various personality factors. Indian adaptation of Dr. R.B. Cattell Sixteen P.F. test by Dr. S.D. Kapoor has been used for measuring all the personality factors. Except this test there was no such test which could measure such a large number of personality factors. The details of aforesaid test are as follows :

SIXTEEN P.F. QUESTIONNAIRE

(A scale for measuring sixteen factors of personality)

Edition	-	Form-C, Hindi Edition
Author	-	Raymond. B. Cattell and Holla Beloff (OriginalAuthors)
Publisher	-	Institute for Personality and Ability Testing, 1602-04 Cornado Drive, Champaign, Illinois 61820, U.S.A.
Year	-	1967.
Indian Adaptation	-	Dr. S.D. Kapoor, Psycho Centre T-22, Green Park, New Delhi - 110016.
	-	First Hindi Edition : 1970.
	-	Indian Reprint : 1982, 1990.
	-	Revised Edition : 1991

Description of the Test :

The sixteen Personality Factor Questionnaire (16 P.F.) is an objectively scoreable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time. The test was designed for use with individuals age at sixteen and above. It contains form A, B,

C,D for literate individuals where as form E and F of the test are designed for individuals with marked educational and reading deficits.

It is a new aid for teachers, guidance specialists and for general clinical and research use. It gives an objective analysis of the individual's personality to supplement teacher's personal evaluation. It is a standardized test that can be given to a single individual, or in groups to yield a general assessment of personality makeup. It measures sixteen distinct dimensions or factors of personality which have been found by psychologists to come nearer, covering the total personality. The personality factors are called by standard letter symbols as factor A, factor B, etc. Each factor is a continuous scale, has low and high levels of intensity.

The sixteen personality characteristics which are measured by the tool are as shown in table no. 3.2

This test can be scored for broad secondary order factors as well as for the sixteen primaries. Eight second order factors have been identified and replicated at the present time. The first four which will generally be of most interest to practitioners, are Introversion Vs. Extroversion (Q_I), Low anxiety Vs. High anxiety(Q_{II}), Tender minded-emotionally Vs. Toughpoise (Q_{III}), and Subduedness Vs. Independence (Q_{IV}) respectively.

[66]

TABLE 3.2

S.No.	Factors	Characteristics		Total No. of Scores in Each Factors
1.	A	Reserved	- Out Going	18
2.	B	less Intelligent	- More Intelligent	8
3.	C	Effected by Feeling	- Emotionally Stable	18
4.	E	Humble	- Assertive	18
5.	F	Sober	- Happygo Lucky	18
6.	G	Expedient	- Conscientious	18
7.	H	Shy	- Venturesome	18
8.	I	Thoughminded	- Tenderminded	18
9.	L	Trusting	- Suspicious	18
10.	M	Practical	- Imaginative	18
11.	N	Forthright	- Shrewd	18
12.	O	Placid	- Apprehensive	18
13.	Q_1	Conservative	- Experimenting	18
14.	Q_2	Group Dependent	- Self Sufficient	18
15.	Q_3	Undisciplined self conflict	- Controlled	18
16.	Q_4	Relaxed	- Tense	18

Each of the sixteen dimensions of personality and eight second order factors measured by this test has a technical name(or several such names) and an alphabetic symbol for conveniences.

Administration :

The test is very easy to administer and most subjects find it interesting, it is without time limit, yet it can be completed within forty-five minutes. Instructions and examples are written on the cover page and thus it is easier to administer even by the beginners.

Scoring :

Answer-sheets are scored by two scoring key. Each key gives raw scores of eight of the factors. Key no. 1 gives the raw scores of A,C,F,H.,L,N, Q_1 and Q_3 personality characteristics where as key no. 2 gives the raw scores of B, E, G, I, M, O, Q_2 and Q_4 personality characteristics.

Interpretation :

Each dimension is defined by two poles or extremes. The left hand one is a score at the low end of the stens (1,2,3) and the right hand at the high end of the stens (8,9,10). However, one should guard against assuming that high scores (that is 10) are necessarily good and low scores, bad, because each type of temperament usually has both strong and weak points.

Reliability :

Reliability of the sixteen P.F. has been measured by the following methods :

1. Dependability, i.e., short term test-retest correlations.

2. Stability, i.e., retest after a long interval.

3. Equivalence.

TABLE 3.3

DEPENDABILITY COEFFICIENTS : TEST- RETEST AFTER 11 DAYS N = 20,
AGES 15 TO 21 YEARS, ON FORM C.

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.83	0.69	0.73	0.81	0.86	0.66	0.79	0.58	0.62	0.76	0.62	0.84	0.58	0.69	0.59	0.77

TABLE 3.4

STABILITY COEFFICIENTS : TEST - RETEST AFTER EIGHT WEEKS N= 98,
AGES 15 AND ABOVE ON FORM C

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.79	0.58	0.69	0.78	0.73	0.65	0.71	0.58	0.58	0.66	0.59	0.81	0.59	0.62	0.51	0.63

TABLE 3.5

Equivalence Coefficients
On Form C & D, N = 20, Age 15 & Above Years

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.56	0.41	0.49	0.43	0.51	0.41	0.68	0.46	0.39	0.42	0.38	0.62	0.63	0.43	0.41	0.55

Validity :

The item in these final form are the survivors from several thousands of items originally tried and constitute only those which continue to have significant validity against the factors after ten successive factor analyses (Cattell, 1973) on different samples. These analyses have both varified the existence and natural structure of the sixteen factors, and cross validated the

[69]

test items in their correlation with the factors on different adult population samples. Concept validity coefficients also have been evaluated by following two methods :

1.   Direct Concept Validity.

2.   Indirect Concept Validity.

Direct concept validity coefficients of sixteen scales have been evaluated directly by correlating the scale scores with the pure factor it was designed, to measure. Table No.3-6 gives these concept validity values for single form as shown in test manual.

TABLE 3.6

DIRECT CONCEPT VALIDITIES OF THE SIXTEEN P.F. SCALES (N=958)

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.79	0.35	0.70	0.63	0.83	0.67	0.92	0.70	0.49	0.44	0.41	0.71	0.62	0.70	0.68	0.57

Indirect concept validity may also be evaluated indirectly by determining how well the test scale's correlations with a representative sample of diverse psychological variables agree with those the conceptual criterion (pure factor) is expected to have. Table No. 3-7 presents these concept validities, indirectly evaluated for the full (Form A-B-C-D) as shown in the test manual.

[70]

TABLE 3.7

INDIRECT CONCEPT VALIDITIES OF THE FULL 16 P.F. (N=606)

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.96	0.95	0.95	0.91	0.96	0.94	0.95	0.96	0.91	0.74	0.63	0.84	0.83	0.90	0.93	0.93

TABLE 3.8

VALIDITIES ESTIMATED FROM CORRELATION OF TWO FACTORS HALVES (C & D FORMS TOGETHER)

FACTORS

A	B	C	E	F	G	H	I	L	M	N	O	Q_1	Q_2	Q_3	Q_4
0.91	0.82	0.85	0.89	0.93	0.77	0.89	0.71	0.74	0.87	0.74	0.92	0.70	0.83	0.72	0.88

This test is undoubtedly a major development in the personality area, originally based on a comprehensive factor analysis. A prodigious amount of statistical work has gone in to it. No, other test covers such a wide range of personality dimensions and never before have dimensions been so meticulously determined. It is little wonder that translation of sixteen P.F. into twenty-four languages and adaptation for five other English speaking cultures exist to facilitate international comparison. It has been widely used in a large no. of studies throughout the whole world.

Norms :

Sixteen P.F. Test : 1970 Hindi Edition's manual has mentioned the two types of norms (Male & Female) for form C and form D of different age groups for students and adults. Norms have been revised in 1991.

[71]

3 (b) Measurement of Values :

The investigator assume as stated in the first chapter that the values of students affect their attainment. They are increasingly concerned with the transmission of modern and democratic values with a view to create a technological society. There are several values test available in the field of psychology and education. All port Vernon and Lindzey study is one of the most important and reliable test. This test measures six important values viz. theoretical, political, aesthetic, social, economic and religious. One of the main objective of the present study is to study the personal and educational values. The Allport Vernon and Lindzey test did not have these values. Hence, the researcher used the Personal Values Questionnaire constructed by Dr. Shanta Kumari Agarwal which covers all the six values viz. Personal, religious, educational, materialistic, social and humanistic. It contains sixty pairs items representing a variety of familiar situation. In all, there are 120 statements, twenty of which measure each of six values. Basically, it was a test to measure the values of students.

The revision was made with the sole purpose of making it suitable for girls. In this process of revision, the many statements have been changed and reframed in keeping view to make suitable for girls also.

The revised test has been passed through the process of analysis and standardization. The difficulty indices and discriminating power which range from .20 to .80 and .18 & above were determined through the method suggested by Garrett[1].

Administration :

The administration is very easy. Instructions for administering has been given in detail. The subject record his responses by putting a weight against the item selected on a separate answer sheet, containing six pages.

Scoring :

Scoring is too simple. The weights and scores on each page has been added for each value and the total has been transcribed at the bottom of the each page. The each page total for each of the Six values has been summed up on the table printed at the beginning of the answer sheet.

Reliability :

The reliability coefficients of Personal Value Questionnaire (PVQ) were determined from the sample taken for this study.

TABLE 3.9

RELIABILITY COEFFICIENTS OF THE P.V.Q.

Method	Reliability Coefficients
Split Half	.86
Rational Equivalence	.90

There is a clear agreement between the coefficient of reliability found by two different methods.

Validity :

The validation of the content(test items) through competent judgments has been made, again on the same sample. Less defensible than content validity is the judgement process called "Face Validity". Judgements of face validity were relevant to test items situations.

The index of reliability is same as a measure of validity.[2]

Hence, Validity Coefficient $r_{1\infty} = \sqrt{\text{reliability coefficient}}$

$$= \sqrt{.86}$$

$$= .93$$

This means that the test measures true ability to the extent expressed a r of .93.

[74]

3(c) Socio-Economic Status Scale :

A scale for measuring Socio-Economic Status for rural and urban pupils.

Edition : 1987

Author : Kulshreshtha, S.P.

Publisher : Psychological Corporation, 4/230,Kacheri Ghat Agra.

Description of the Scale :

Socio-Economic Status Scale (SESS) Form A for urban people and (SESS) Form B for rural people each consists of five component variable which were found to be most significant indicating the S.E.S. of urban and rural families. Both the scale Form A and Form B are verbal which contains 20 Items each.

Administration and Scoring :

This scale can be administered individually as well as in the groups also. If the subject fills the information him self, he is supposed to put a Tick (✓) for the due information. The scale has transparent scoring key for easy and simple scoring. Norms have been provided for comparison purpose.

The weightage of each item has been given on the transparent key. Put the key on the scale (page 2) and add the scores mentioned above the each box on the key for each ticked

[75]

or right answer ($\checkmark$). Repeat the same procedure for other page No. 3, 4 and 5. Add all the scores for all pages of scale. This grand total of all the scores for all pages will be the S.E.S. of the testee. Compare the grand total numericals with the norms and assign the category to the person accordingly.

Reliability :

The reliability was calculated by using test-retest method with a short interval of one month for rural and urban scale.

The coefficient of correlation were found quite high (0.85 for rural scale and 0.87 for urban scale)

Validity :

The validity of scale was also calculated by comparing the other scale of S.E.S.. The coefficient of correlation were found 0.89 for urban scale and 0.81 for rural scale respectively.

Norms :

TABLE : 3.10

(SHOWING THE NORMS N= 1000 VILLAGERS)

S.No.	Distribution of Raw Scores	S.E.S.
1.	110 and above	High
2.	60 to 110	Average
3.	Below 60	Low

<div align="center">

TABLE 3.11

(SHOWING THE NORMS N = 1000 URBAN)

</div>

S.No.	Distribution of Raw Scores	S.E.S.
1.	223 and above	High
2.	108 to 223	Average
3.	Below 108	Low

3(d) Group Test of Mental Ability :

Edition   -   Hindi Edition 1984

Author   -   Dr.S.S. Jalota

Publisher   -   Published by the author 225,sector 16, Chandigarh.

Description of the Test :

Aforesaid test consists of activities that are verbal numerical and reasoning tasks. This test measures the mental ability of VIII, IX and X class students mainly 15 to 18 years old. It consists of 100 items.

Administration and Scoring :

This test is simple to administer for a class in a period of 45 minutes. All the instructions are provided to the students and they are asked to response on test items on separate answer sheet. Scoring is being made with the help of general scoring key and the category is being determined with the help of stanine norms.

Reliability :

Reliability coefficients were found satisfactory (0.91) when the split half method was used and when retesting took place with in a very short time, it was found 0.89.

Validity :

Validity of revised test has been reported 0.81 on the basis of factor analysis.

3 (e) Measurement of Scholastic Achievement :

The investigator had taken the U.P. Board high school examination marks in different subjects as their scholastic achievement.

The reliability and validity of above scholastic achievement was tested by the judgment of the concerning subject teachers who taught them the particular subject.

4.   Variables Involved :

The present study involved three kinds of variables, namely :

(a)   Dependent Variable
(b)   Independent Variables
(c)   Controlled Variables

(a) Dependent Variable :

The dependent variable in this study was scholastic achievement. As mentioned above, annual high school examination marks were recorded as dependent variable.

[78]

(b) Independent Variables :

i- Sixteen Personality factors had been measured as independent variables by Dr. R.B. Cattell 16 P.F. Test. A little description of all sixteen personality factors have been made in Chapter-I. An attempt had been made to bring out the relationship of each personality factors with scholastic attainment.

ii- Values have also been used as an independent variables. It was attempted to find out the relationship of all six values to academic achievement of girls.

(c) Controlled Variables :

In the present study, only the S.E.S. intelligence and sex have been controlled. Sex has been controlled by restricting the study to male students only. Age was not considered important in this study, as the age variability in this population sample of Chitra Koot Dham Mandal, was found of low magnitude. Average age range of the total sample was found to be 17, the range of variability being from sixteen to eighteen. Only 30 out of 1200 boys were fifteen years old. In view of very narrow range of age variability, it was not considered important to control the age factor. Secondly, the students of this sample were not immature chronologically and it was thought that variation in intelligence personality characteristic and values introduced by age may not be significant, as it is generally found that the growth of intelligence and development

[79]

of basic dimensions of personality are almost completed by the time a child reaches seventeen or eighteen year of his age. Thus, in the present study, the age was not taken into consideration. Further in the present study the effects of school differences have been controlled by drawing out a random sample of schools using lottery system and it was thought that good and poor schools of the population had equal chance to emerge in the sample.

The variables involved in this study have been denoted by the following symbols :

1. Dependent Variable (Academic Achievement)   Y

2. Independent Variables   X

(i) Sixteen Personality Facotors $(X_1, X_2, X_3 ... X_{16})$

(ii) Six Values $(X_{17}, X_{18}, X_{19}, X_{20}, X_{21} \& X_{22})$

Collection of Data :

The subject of study were the X class girls studying in different girls school of Chitra Koot Dham Mandal Banda. No. of subjects drawn as a sample from each inter college were listed in table No. 3-1, of this chapter. The principals of these girls colleges were approached personally one by one and the objectives of the present study were explained to them. They were requested to provide the facilities for the collection of data. The concerning class teachers were also requested to help

[80]

for data collection. They were instructed to answer the questions sincerely and truthfully. They were also assured that the responses would be kept strictly confidential.

The collection of the data for the present study was spread over in three phases. During the first phase, data was collected during second fortnight of December, 1999 and during the second phase, the first fortnight of Feb. 2000. Concerned schools from which the sample for the present study was drawn, were intimated well in time about the testing programme proposed to be carried out by the investigator. The tests were administered with the help of a selected set of colleagues each one of whom was thoroughly conversant with the administration procedures to be adopted during collection of data. As a further precaution a set of type written instruction was handed over to each tester and these instructions were strictly observed during the testing programme. During third face, Board scores were collected in second fortnight of July 2000.

Organisation of Data :

The data collected through the use of the various tools, however reliable, valid and adequate, it may be, were yet but raw. It needs to be systematized and organized i.e. edited, classified and tabulated before it can serve any worthwhile purpose. After scoring all the tests, the investigators organized the whole collected data, after being checked to see accuracy, utility and completeness.

[81]

Statistical Techniques Used :

The following statistical procedures were adopted for the analysis of data :

(a) Presentation of Data in the form of Frequency Distribution :

In the present investigation the following things have been studied on the basis of frequency distributions :

i-   The study of the distribution of scores, central tendencies, S.D. and Standard Error of the mean of the distribution.

ii-   Study of skewness and kurtosis. On the basis of these two things, the investigator has tried to judge that haw far the distribution is representing to the normal distribution.

iii- The third and most important thing which have been tried to read is the modality of the frequency distribution. As we know that the Pearson product-moment is only applicable when there is no bimodality or multi modality in the frequency distribution. If it is there Pearson product-moment correlation can not be applied. The frequency distribution is the most important and easiest way in throwing light on these things. Another characteristics which is also very important for using the Pearson product-moment correlation is, that this is only applicable when the distribution of score is near the characteristics of the distribution of normal curve. As a matter of fact Guilford[3]

[82]

has suggested three basic criteria for using Pearson product-moment correlation. One, out of those three characteristics can very easily be read with the help of the frequency distribution.

(b) The Coefficient of Correlation :

"A Coefficient of correlation is a single number that tells us to what extent two things are related, to what extent variation in one go with the variation in the other". Guilford[4] warns that the following conditions must be observed before using the *Pearson product-moment correlation* :

1. The trend of relationship between X and Y be rectilinear. This can be determined as a rule, by inspection of scatter diagram.

2. Second condition of r is that of homoscedasticity. When columns and rows are relatively homoscedastic, the Pearson r can be computed. This condition will prevail generally when the two distributions are fairly symmetrical within themselves. Thus, we need not go so far as to compute standard deviation of columns and rows in order to find it out.

3. Number of cases should be large in the sample. It is necessary for Pearson product-moment correlation that the number of cases should be more than thirty.

[83]

The above mentioned conditions have strictly been followed in the present investigation.

After being satisfied with all the conditions mentioned above, the investigator had used the Pearson product-moment correlation with full confidence. The basic formula for computing Pearson product moment coefficient of Correlations is :

$$r_{xy} = \frac{\Sigma XY}{N\sigma_x\sigma_y}$$

Where r_{xy} = Correlation between X and y

σ_x = Standard Deviation of variable x

σ_y = Standard Deviation of variable y

Σxy = The sum of the product of deviation x and y from their respective means.

When we apply this formula in a scatter diagram, it takes the following shape :

$$r_{xy} = \frac{\frac{\Sigma xy}{N} - Cx\ Cy}{\sigma_x\ \ \sigma_y}$$

Where x and y are the deviations from assumed mean

N = No. of Cases in the sample

Σxy = The summation of the product of x and y

σ_x = Standard Deviationof variable x

σ_y = Standard Deviationof variable y

[84]

$$Cx = \frac{\Sigma fx}{N} = \bar{x}$$

$$Cy = \frac{\Sigma fy}{N} = \bar{y}$$

In the present investigation the following correlations have been computed between the independent variables and dependent variables.

1. Correlations between personality traits and academic achievements.

2. Correlations between values and Academic Achievement.

3. Correlation between intelligence and academic achievement.

4. Correlation between S.E.S. and academic achievement.

5. Correlations between personality traits and intelligence.

6. Correlations between personality traits and S.E.S.

7. Correlations between intelligence and values.

8. Correlations between S.E.S. and values.

9. Correlations between personality traits and values.

(c) Partial Correlation :

"The product moment coefficient of correlation between two variables x_1 and x_2 with the influence of third variable x_3 eliminated by statistical method is know as Partial Coefficient Correlation"[5] and is written $r_{12.3}$. The formula which has been used to calculate the partial coefficient of correlation is laid down in the following :

[85]

$$r_{12.3} = \frac{r_{12} - r_{13} \times r_{23}}{\sqrt{\{1-r_{13}^2\}} \sqrt{\{1-r_{23}^2\}}}$$

Where $r_{12.3}$ = correlation between 1 and 2 and the effect of 3 is eliminated. This is known as partial coefficient of correlation.

r_{12} = The Correlation between variable No. 1 and 2

r_{13} = The Correlation between variable No. 1 and 3

r_{23} = The correlation between variable No. 2 and 3

The partial coefficient defined earlier is known as first order coefficient. When the effects of two variables are eliminated the coefficient of correlation is known as Second Order Coefficient of Correlation. Second order coefficient of correlation is calculated from first order of Coefficient of Correlation. The formula[6] for partial coefficient of Correlation between x_1 and x_2 with x_3 and x_4 constant may be written in the following ways :

$$r_{12.34} = \frac{r_{12.3} - r_{14.3} \times r_{24.3}}{\sqrt{\{1-r_{14.3}^2\}} \sqrt{\{1-r_{24.3}^2\}}}$$

Or

$$r_{12.34} = \frac{r_{12.4} - r_{13.4} \times r_{23.4}}{\sqrt{\{1-r_{13.4}^2\}} \sqrt{\{1-r_{23.4}^2\}}}$$

[86]

In the present investigation two kinds of partial coefficients of correlation have been calculated. First is partial correlation of first order in which intelligence and S.E.S. have been controlled separately between the relationship of personality and values. Another partial coefficient of correlation of first order has been calculated between values and academic achievement, keeping intelligence and S.E.S. Constant separately.

Second is the partial coefficient of correlation of Second order in which intelligence and S.E.S. have been controlled at a time, with the relationship of personality and academic achievement.

Another second order partial coefficient of correlation has also been calculated between values and academic achievement controlling two variables at a time, they are intelligence and S.E.S.

(d) Multiple Correlation :

"In multiple Correlation, knowing the correlation of each of the several variables with a criterion as well as their correlation with one another, we attempt to obtain a weighted composite of the variables that will give the best possible prediction of the criterion."[7]

[87]

$$R_{1\ (23......n)} = \sqrt{\left\{1 - \frac{\sigma^2_{1.23\ ...n}}{\sigma_1^2}\right\}}$$

If we replace 1.23 ....n in this formula by its value, we get.

$$\sigma_{1.23...N} = \sigma_1\sqrt{\{(1-r^2_{12})\ (1-r^2_{13.2}\}}$$

and, we may write the general formula for

$$R_{1.23\ .....N} = \sqrt{\{1-(1-r_{12})\ (1-r^2_{13.2})\ (1-r^2_{m...N-1})\}}$$

The independent variables may be eliminated in more than one order.

Multiple R shows how accurately the scores from a given combination of variables represent the actual values of the criteria when our independent variables are combined in the best liner equation. R is the maximum correlation obtainable from a linear equation connection, earned and predicted scores.

In the present investigation multiple coefficient of correlation techniques has been adopted to analyse the data. Academic achievement has been predicted by the two variables, they are, personality traits alongwith values.

(e) Multiple Regression Analysis :

This method is employed for determining how an external criterion stands in relation to a number of independent variables.

It is used for prediction purposes, where it is desirable to predict a dependent variable from a number of independent variables.

The regression equation which expresses the relationship between a single variable X_1 and any number of independent variables X_2, X_3 ..... X_n may be written in deviation form as follows.[8]

$$\bar{x}_1 = b_{12.34...n}\, x_2 + b_{13.24....n}\, x_3 + ... + b_{n.23............(n-1)}\, x_n$$

and in score form :

$$\overline{X}_1 = b_{12.34...n}\, X_2 + b_{13.24\,...n}\, X_3 + ... + b_{n.23\,...(n-1)}\, X_n + K.$$

These regression coefficient $b_{12.34..n,}$ $b_{13.24............n}$ etc. give the weights to be attached to the scores in each of the independent variables when X_1 is to be estimated for all those in combination. Further, these partial regression coefficients give the weights which each variable exerts in determining X, when the influence of the other variables is excluded. From the regression equation, we can predict as to what role each of the several variables plays in determining the scores in X_1... the criterion. But the relative importance of the independent variable in predicting the dependent variables can not be determined since the standard deviations of the variables as unit of measurement are different. In order to bring the variables to comparable unit, they are represented in terms of standard scores, when expressed in terms of σ scores, partial

regression coefficient are usually called, Beta coefficient. The Beta coefficient may be calculated directly from b as follows :

$$\beta_{12.34...n} = b_{12.34..n} \frac{\sigma_2}{\sigma_1}$$

The multiple regression for a variable may be written in σ scores as :

$$\overline{Z}_1 = \beta_{12.34\ ...n}\ Z_2 + \beta_{13.24\ ....n}\ Z_3 + ... + \beta_{1n.23\ ......(n-1)}\ Zn$$

Beta co-efficients are called beta weights. We are in a position to determine from the correlations calculated, the relative weight with which independent variables 'enters in', or contribute to, the criterion, independently of other factors.

In this study first of all on the basis of 22 variables (16 personality traits,6 values,) multiple regression analysis has been done, and then multiple regression equation has been framed.

(f) Significance of the multiple R : (Fiduciary Limits)

Multiple R is always positive, always less than 1.00 and always greater than the zero order coefficient of correlation. For an R derived from any number of variables, the standard error is :

$$\sigma_R = \frac{1-R^2}{\sqrt{\{N-m\}}}$$

in which, N-m represents the number of degree of freedom. Unless N is large and much larger than M, formula under estimate the amount of sampling error. After getting the value of standard error, confidence interval of 2.58 or 1.96 is multiplied by standard error. This multiplication is again added and subtracted ± from the value of R. If the obtained value is in between these two limits the multiple R is called significant.

In the present investigation the standard error and the significance of multiple R has been tested against .01 level of significance.

(g) Interpretation of R in terms of Coefficient of Alienation (K) :

The coefficient of alienation gives us an estimate of the reduction in errors of prediction from the knowledge of correlated measurement. When R=0, K = 1 and the standard error of estimate $\sigma_{1.23}$ n $= \sigma_1 \sqrt{\{1-R^2_{1.23\ ...n}\}}$ becomes equal to σ_1 that is the error of the estimate is as great as obtained when the dependent variable is predicted with out the knowledge of the independent variables. When R=1, K reduces to zero and so is the standard error of estimate. This indicates that the margin of error of prediction is zero when the correlation is perfect. The formula for finding out the coefficient of alienation is :

$$K = \sqrt{1 - R^2}$$

In the present study coefficients of alienation has been determined.

(h) The Interpretation of R in Terms of Forecasting Efficiency (E)

Index of forecasting efficiency (E) is defined as the percentage of reduction in error of prediction. It is estimated by the formula.

$$E = 100 \{1- \sqrt{(1-R^2)}\} = 100 (1-K)$$

Forecasting efficiency has been calculated and has been presented in the table which has been used for interpretation.

(i) The interpretation of R in Terms of Co-efficient of Determination :

Another mode of interpretation of R which have been used in this study in terms of R^2 is called coefficient of determination. The values of R^2, when multiplied by 100 gives the percentage of the variance in the dependent variable, that depends upon or is associated with, or predicted by, the set off independent variables.

Multiple R of the present study has been squared and multiplied by 100, in order to get the coefficient of determination.

The above mode of the interpretating the results were applied in each of the multiple correlation.

(j) Significance of the Difference between Two Means:

In the present study the personality factors and values of high achievers and low achievers had been compared. This comparison was made on the basis of C.R. test. In calculating C.R. test the following formula, which is used for finding out difference between uncorrelated means in two samples have been presented in the following lines.

$$\sigma_D = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}$$

Where σ_D is the standard error of the difference between two means.

σ_1 and σ_2 are the standard deviations of the two group scores.

N_1 and N_2 are no.of cases in both the group respectively.

$$C.R. = \frac{D}{\sigma_D}$$

Where D is the difference between M_1 and M_2 where M_1 and M_2 are the means of both groups.

[93]

8.   Computations Done :

In the present study all the computations had been made with the help of computer centre of council for social development, 53 Lodi-Estate, New Delhi. After making all the necessary computations, the data were summarized and interpreted. There have been set-forth in the tables of appearing in the next chapter of thesis.

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❖❖❖❖❖❖❖

CHAPTER-IV

CHAPTER - IV

Analysis and Interpretation of the Data :

The design of this investigation was presented in chapter third and the investigator had framed certain hypotheses to be tested with the help of data collected during investigation. The present chapter presents the analysis and interpretation of the data. Before doing so, it would be worthwhile to recall the out line of the design. The analysis of the data had been divided into four parts :

PART - A
STUDY OF PERSONALITY CHARACTERISTICS AND ACADEMIC ACHIEVEMENT

1. Distribution of scores of the personality characteristics.

2. Distribution of scores on academic achievement.

3. Correlation with academic achievement.

4. Correlation with academic achievement partialling out intelligence.

5. Correlation with academic achievement partialling out S.E.S.

6. Correlation with academic achievement partialling out intelligence and S.E.S.

PART - B
STUDY OF VALUES AND ACADEMIC ACHIEVEMENT

1. Distribution of scores on values.

2. Correlation of values with academic achievement.

3. Correlation of values with academic achievement partialling out intelligence.

4. Correlation of values with academic achievement partialling out S.E.S.

5. Correlation of values with academic achievement partialling out intelligence and S.E.S.

PART - C
PREDICTION OF ACADEMIC ACHIEVEMENT

Prediction of academic achievement by combining personality factors and values.

PART - D
COMPARATIVE STUDY OF HIGH AND LOW ACHIEVERS

Comparative study of the personality factors and values of high and low achievers, on the basis of Critical Ratio.

PART-A
STUDY OF PERSONALITY FACTORS AND SCHOLASTIC ACHIEVEMENT

1. *Study of the Distribution of Scores of Female Students on Personality Factors :*

Factor A : Reserved Vs.Out going

[96]

TABLE 4.1
DISTRIBUTION OF SCORES ON FACTOR-A
N=1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	12	1200	1.00	100.00
2	11	18	1188	1.50	99.00
3	10	48	1170	4.00	97.50
4	9	126	1122	10.50	93.50
5	8	180	996	15.00	83.00
6	7	396	816	33.00	68.00
7	6	196	420	18.00	35.00
8	5	96	204	8.00	17.00
9	4	90	108	7.50	9.00
10	3	18	18	1.50	1.50

Mean = 6.96, Median = 6.95, S.D. = 1.69, Skewness = 0.035, Kurtosis = 0.269, Standard Error of mean = 0.119

Discussion :

Frequency distribution no. 4.1 representing the distribution of scores of female students on factor 'A' appears to be symmetrical distribution. Mean and median are approximately the same. The value of skewness is almost zero. The value of kurtosis is the same as the value of mesokurtic curve. These above three facts are the evidence that the distribution of scores is normal one.

The standard error of mean shows that the chances of variation in the mean from other sample are very low.

Factors B : Less Intelligent Vs. More Intelligent

TABLE 4.2

DISTRIBUTION OF SCORE ON FACTOR - B

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	6	192	1200	16	100
2	5	204	1008	17	84
3	4	300	804	30	67
4	3	240	444	20	37
5	2	204	204	17	17

Mean = 3.95,Median = 3.93,S.D. =1.28, Skewness = 0.46, Kurtosis = 0.266, Standard error of mean = 0.0905

Discussion :

Frequency distribution shown in table No. 4.2 is almost symmetrical about its mean position. The evidences of normality being, (1) Mean and median fall almost on the same point. (2) The value of skewness is very close to zero. (3) Kurtosis is also very close to mesokurtic curve.

Standard error of mean shows that the sample's mean is fairly close to population 's mean. Hence, these scores may be used very safely in calculating the product-moment coefficient of correlation.

Factor C : Affected by Feelings Vs. Emotionally Stable

[98]

TABLE 4.3

DISTRIBUTION OF SCORES ON FACTOR- C

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	18	1200	1.50	100.00
2	11	72	1182	6.00	98.50
3	10	108	1010	9.00	97.50
4	09	168	1002	14.00	83.50
5	08	196	834	18.00	69.50
6	07	240	618	20.00	51.50
7	06	180	378	15.00	31.50
8	05	114	198	9.50	16.50
9	04	54	84	4.50	7.00
10	03	18	30	1.50	2.50
11	02	12	12	1.00	1.00

Mean 7.46, Median = 7.42, S.D. = 2.03, Skewness = 0.059, Kurtosis = 0.267, Standard Error of mean = 0.143

Discussion :

The above distribution No. 4.3 appears to be normal. Since table shows that mean and median of the distribution are nearly the same. The value of skewness is very close to zero. Kurtosis is also very close to the mesokurtic curve.

Standard error of mean shows that the chances of variation in the mean from other equivalent samples are very low.

Factor E :Humble Vs. Assertive

[99]

TABLE 4.4

DISTRIBUTION OF SCORES ON FACTOR - E

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	9	18	1200	1.50	100.00
2	8	36	1182	3.00	98.50
3	7	144	1146	12.0	95.50
4	6	180	1002	15.0	83.50
5	5	438	822	36.5	68.50
6	4	192	384	16.0	32.00
7	3	132	192	11.0	16.00
8	2	48	60	4.0	5.00
9	1	12	12	1.0	2.00

Mean = 5.00, Median = 4.99, S.D. = 1.503, Skewness = 0.019

Kurtosis = 0.264, Standard error of mean = 0.106

Discussion :

The distribution representing the performance of the female students on factor 'E' reveals that the mean and median almost coincide on the same point. The difference between the two, is almost negligible. The distribution is almost mesokurtic. Skewness is almost near to zero. On the whole, it can be safely said that the distribution of scores on this factors is almost normal. The standard error of mean shows the dependability of mean.

[100]

Factor F : Sober Vs. Happy-go-lucky

TABLE 4.5

DISTRIBUTION OF SCORES ON FACTOR F

N= 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	11	72	1200	06	100
2	10	120	1128	10	94
3	09	156	1008	13	84
4	08	252	852	21	71
5	07	264	600	22	50
6	06	144	336	12	28
7	05	132	192	11	16
8	04	60	60	05	05

Mean = 7.52, Median = 7.5, S.D. = 1.82, Skewness = 0.032, Kurtosis = 0.268, Standard error of mean = 0.129

Discussion :

Frequency distribution representing the distribution of scores on factor 'F' appears to be a symmetrical distribution. Table No. 4.5 shows that mean and median do not differ much. Skewness is very near to zero. The Value of kurtosis is in closeness to mesokurtic curve. All these evidences prove that distribution tends to be normal approximately.

Standard error of mean shows that there are 99% chances of variation in the sample mean from 7.19 to 7.85 (7.52±2.58x.129)

[101]

Factor G : Expedient Vs. Conscientious

TABLE 4.6
DISTRIBUTION OF SCORES ON FACTOR - G
N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	90	1200	7.5	100.00
2	11	90	1110	7.5	92.50
3	10	210	1020	17.5	85.00
4	9	420	810	35.0	67.50
5	8	198	390	16.5	32.50
6	7	108	192	9.0	16.00
7	6	84	84	7.0	7.00

Mean = 9.005, Median = 9.00, S.D. = 1.45, Skewness = 0.001, Kurtosis = 0.263, Standard error of mean = 0.102

Discussion :

Table No. 4.6 represents the distribution of scores on factor 'F'. Mean and median do not differ too much. The value of skewness is very much close to zero. The distribution is almost mesokurtic.

On the whole, it can be said that the distribution of scores on factor 'G' is almost normal. Low standard error of mean shows the dependability of sample's mean.

Factor H : Shy Vs. Venturesome

[102]

<u>TABLE 4.7</u>

DISTRIBUTION OF SCORES ON FACTOR - H

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	6	1200	0.5	100.00
2	11	18	1194	1.5	99.50
3	10	150	1176	12.5	98.00
4	9	180	1026	1.5	85.50
5	8	210	846	17.5	70.50
6	7	240	636	20.0	53.00
7	6	192	396	16.0	33.00
8	5	168	204	14.0	17.00
9	4	24	36	2.0	3.00
10	3	12	12	1.0	1.00

Mean = 7.385, Median = 7.35, S.D. = 2.044, Skewness = 0.051, Kurtosis = 0.267, Standard error of mean = 0.144

Discussion :

Table No. 4.7 represents the distribution of scores on factor 'H'. It seems to be symmetrical. Mean and median are very close to each other. Value of skewness is insignificant. Kurtosis is also very close to mesokurtic curve. Above evidences show that the distribution tends to be normal.

Standard error of mean is also very low which shows that the sample's mean is fairly close to the population mean.

[103]

Factor I : Tough minded Vs. Tender mined

TABLE 4.8

DISTRIBUTION OF SCORES ON FACTOR - I

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	10	36	1200	3.00	100.00
2	9	48	1164	4.00	97.00
3	8	108	1116	9.00	93.00
4	7	252	1008	21.00	84.00
5	6	270	756	22.50	63.00
6	5	288	486	24.00	40.50
7	4	90	198	7.50	16.50
8	3	60	108	5.00	9.00
9	2	48	48	4.00	4.00

Mean = 5.93, Median = 5.92, S.D. = 1.69, Skewness = 0.017, Kurtosis = 0.265, Standarderror of mean = 0.119

Discussion :

Table No. 4.8 represents the distribution of scores of female students on factor 'I'. The distribution seems to be symmetrical. It is almost free from skewness. Mean and median are almost same. The value of kurtosis is in very closeness of the value of mesokurtic curve. On the basis of the above grounds, it can be safely said that the distribution approaches towards normality. Low standard error of mean also shows that our sample's mean is dependable.

[104]

Factor L : Trusting Vs. Suspicious

TABLE 4.9

DISTRIBUTION OF SCORES ON FACTOR - L

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	10	36	1200	3.0	100.00
2	9	54	1164	4.5	97.00
3	8	36	1110	3.0	92.50
4	7	72	1074	6.0	89.50
5	6	270	1002	22.5	83.50
6	5	270	732	22.5	61.00
7	4	264	462	22.0	38.50
8	3	96	198	8.0	16.50
9	2	90	102	7.5	8.50
10	1	12	12	1.0	1.00

Mean = 5.12, Median = 5.01, S.D. = 1.89, Skewness = 0.174, Kurtosis = 0.273, Standard error of mean = 0.133

Discussion :

Table No. 4.9 representing the distribution on factor 'L' shows that the distribution is almost symmetrical. Mean and median do not differ much with each other. It is slightly positively skewed but the skewness is too small to be insignificant. The distribution is slightly platikurtic, yet not deviate too much from the characteristics of N.P.C.. It is also clear from above evidences that the distribution approaches to be normal. The low value of standard error of mean shows the worthwhileness of the sample's mean.

[105]

Factor M : Practical Vs. Imaginative

TABLE 4.10

DISTRIBUTION OF SCORES ON FACTOR - M

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	10	60	1200	5	100
2	9	144	1140	12	95
3	8	180	996	15	83
4	7	168	816	14	68
5	6	252	648	21	54
6	5	192	396	16	33
7	4	120	204	10	17
8	3	48	84	4	7
9	2	36	36	3	3

Mean = 6.4, Median = 6.31, S.D.= 1.99, Skewness = 0.135, Kurtosis = 0.269, Standard error of mean = 0.14

Discussion :

The above frequency distribution seems to be almost normal. Mean and median are very close to each other. Value of skewness is too low to be insignificant The value of kurtosis is also in closeness with the value of mesokurtic curve.

Again, the low value of standard error of mean indicates that our sample's mean will hit the population's mean very closely.

[106]

Factor N : Forthright Vs. Shrewd

TABLE 4.11

DISTRIBUTION OF SCORES ON FACTOR - N

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	6	1200	0.5	100.00
2	11	36	1194	3.0	99.50
3	10	60	1158	3.0	96.50
4	9	96	1098	8.0	91.50
5	8	150	1002	12.5	83.50
6	7	252	852	21.0	71.00
7	6	240	600	20.0	50.00
8	5	162	360	13.5	30.00
9	4	102	198	8.5	16.50
10	3	54	96	4.5	8.00
11	2	60	42	2.5	3.50
12	1	12	12	1.0	1.00

Mean = 6.49, Median = 6.5, S.D. = 2.109, Skewness = 0.0014, Kurtosis = 0.260, Standard error of mean = 0.149

Discussion :

Above distribution shows that it is quite symmetrical about its mean position. The value of mean & median are almost same. It is also almost free from skewness since its value is very low. The distribution is slightly leptokurtic but does not defaced the curve too much from the characteristics of N.P.C.

[107]

The low value of standard error of mean indicates that the chances of variation in mean from other equivalent samples are low.

Factor O : Placid Vs. Apprehensive

TABLE 4.12

DISTRIBUTION OF SCORES ON FACTOR - O

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	24	1200	2.0	100.00
2	11	60	1176	5.0	98.00
3	10	120	1116	10.0	93.00
4	9	228	996	19.0	83.00
5	8	336	768	28.0	64.00
6	7	234	432	18.5	36.50
7	6	108	198	9.0	16.50
8	5	72	90	6.0	7.50
9	4	18	18	1.5	1.50

Mean = 7.945, Median = 8.00, S.D. = 1.55, Skewness = 0.106, Kurtosis = 0.261, Standard error of mean = 0.109

Discussion :

Above distribution reveals that mean and median are almost same. It is almost free from skewness, However, it is very slightly leptokurtic, yet it does not deviated too much from the characteristics of mesokurtic curve.

All these evidences indicates that the frequency distribution of the personality scores on factor 'O' is normal.

[108]

Standard error of mean shows that the sample's mean is fairly close to the population's mean.

Factor Q_1 : Conservative Vs. Experimenting

TABLE 4.13

DISTRIBUTION OF SCORES ON FACTOR - Q_1

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	18	1200	1.5	100.00
2	11	60	1182	5.0	98.50
3	10	126	1122	10.5	93.50
4	9	234	996	19.5	83.00
5	8	312	762	26.0	63.50
6	7	252	450	21.0	37.50
7	6	114	198	9.5	16.50
8	5	72	84	6.0	7.00
9	4	12	12	1.0	1.00

Mean = 7.995, Mean = 7.981, S.D. = 1.44, Skewness = 0.029, Kurtosis = 0.265, Standarderror of mean = 0.101

Discussion :

Above table reveals that the distribution of scores on factor 'Q_1' is almost, normal and symmetrical to its mean position. Since mean and median are almost same. The value of skewness is too small to be negligible. Kurtosis is in closeness to the value of mesokurtic curve. The standard error of mean also shows that the chances of variation in the mean from the other equivalent samples are very low.

Factor Q_2 : Group-dependent Vs. Self-Sufficient

TABLE 4.14

DISTRIBUTION OF SCORES ON FACTOR - Q_2

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	10	18	1200	1.50	100.00
2	9	72	1182	6.00	98.50
3	8	126	1110	10.50	92.50
4	7	240	984	20.00	82.00
5	6	288	744	24.00	62.00
6	5	228	456	19.00	38.00
7	4	132	228	11.00	19.00
8	3	66	96	5.50	8.00
9	2	30	30	2.50	2.50

Mean = 5.974, Median = 6.00, S.D. = 1.71, Skewness = 0.045, Kurtosis = 0.260, Standard error of mean = 0.120

Discussion :

Above table shows that the distribution is almost normal. Since the mean & median coincide almost to each other. The value of skewness and kurtosis do not deface the distribution so much so that the scores on this factor 'Q_2' may be prohibited to make the use of product-moment coefficient of correlation (r). The standard error of mean shows that there is 0.01 probability that sample's mean does miss the population's mean by more than ± 0.309 (±2.58x.12) only.

Factor Q_3 : Undisciplined Vs. Controlled

TABLE 4.15

DISTRIBUTION OF SCORES ON FACTOR - Q_3

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	12	36	1200	3.0	100.00
2	11	64	1164	4.5	97.50
3	10	108	1110	9.0	92.50
4	9	162	1002	13.5	83.50
5	8	180	840	15.0	73.00
6	7	264	660	22.0	58.00
7	6	180	396	15.0	33.00
8	5	126	216	10.5	18.00
9	4	54	90	4.5	7.50
10	3	36	36	3.0	3.00

Mean = 7.4, Median = 7.27, S.D. = 2.064, Skewness = 0.188, Kurtosis = 0.254, Standard error of mean = 0.145

Discussion :

Above table reveals that the distribution is almost normal. Mean and median are almost same. The value of skewness and kurtosis do not deface the distribution so much from normal distribution so that the use of above scores on factor Q_3 may be prohibited for the use of r.

Standard error of mean shows that the probability is .99 that our sample mean dos not miss the population mean by more than ±.374 or (±2.58x.145)

Factor Q_4 : Relaxed Vs. Tense

TABLE 4.16

DISTRIBUTION OF SCORES ON FACTOR - Q_4

N = 1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	10	18	1200	1.5	100.00
2	9	72	1182	6.0	98.50
3	8	108	1110	9.0	92.50
4	7	234	1002	9.5	83.50
5	6	342	768	28.50	64.50
6	5	204	426	7.0	35.50
7	4	120	222	10.0	18.50
8	3	78	102	6.5	8.50
9	2	24	24	2.0	2.00

Mean =5.97, Median = 6.008, S.D. = 1.68, Skewness = -0.053, Kurtosis = 0.258, Standard error of mean = 0.118.

Discussion :

Table No. 4.16 represents the distribution of scores on factor 'Q_4'. It reveals that mean and median fall almost on the same point. The difference between two is almost negligible. Neither the value of skewness nor kurtosis is to prohibit, the use of above scores in calculating the product-moment coefficient of correlation.

The obtained value of standard error of mean shows that the probability is .01 that our sample mean (5.97) does miss the population mean by more than ±.304 or (±2.58x 0.188)

[112]

2. Study of Distribution of Scores of Female Students on Scholastic Achievement :

<u>TABLE 4.17</u>

DISTRIBUTION OF SCORES ON SCHOLASTIC ACHIEVEMENT

N=1200

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	450-469	2	1200	.16	100.00
2	430-449	4	1198	.33	99.83
3	410-429	18	1194	1.5	99.50
4	390-409	48	1176	4.0	98.00
5	370-389	78	1128	6.5	94.00
6	350-369	252	1050	21.0	87.50
7	330-349	324	798	27.0	66.50
8	310-329	264	474	22.0	39.50
9	290-309	150	210	12.5	17.50
10	270-289	42	60	3.5	5.00
11	250-269	18	18	1.5	1.50

Mean= 337.5, Median = 337.25, S.D.= 31.72, Skewness = 0.024, Kurtosis = 0.275, Standard error of mean = 2.24

Cases between M± 1 S.D. (308 to 371) = 70%

Cases above M+1 S.D. = 12.5% & below M-1 S.D. = 17.5%

Discussion :

Table No. 4.17 represents the frequency distribution of scores of subjects on scholastic achievement. The distribution seems to be symmetrical. The value of skewness is very near to zero and kurtosis is almost very close to the value of mesokurtic curve. Mean and median are the same. It can be

[113]

also seen from table that 70% girls lie in between M±1 S.D. distance. Hence, it can be safely said that the distribution approaches to normal probability curve and the use of Pearson product-moment correlation may be made with the help of above scores.

The standard error of mean shows that the probability is .99 that our sample mean of 337.5 does not miss the population mean by more than ±5.78 or (±2.58 x 2.24) only.

3. The Relationship Between Personality Factors and ScholasticAchieveent :

TABLE 4.18

COEFFICIENTS OF CORRELATION BETWEEN 16 PERSONALITY FACTORS AND SCHOLASTIC ACHIEVEMENT (N=1200)

S.No.	Factors	Name of the Factors	Coefficient of Correlation	Significance Level
1.	A	Reserved Vs.Outgoing	0.1986	**
2.	B	Less IntelligentVs. More Intelligent	0.2163	**
3.	C	Affected by Feelings Vs. Emotionally Stable	0.0741	**
4.	E	Humble Vs. Assertive	0.0287	
5.	F	Sober Vs. Happy-go-Lucky	0.0583	
6.	G	Expedient Vs.Conscientious	0.0761	*
7.	H	Shy Vs. Venturesome	0.1721	**
8.	I	Tough minded Vs. Tender-minded	−0.0749	*
9.	L	Trusting Vs. Suspicious	0.0591	
10.	M	Practical Vs. Imaginative	0.0414	
11.	N	Forth right Vs. Shrewd	0.0312	
12.	O	Placid Vs. Apprehensive	0.0426	
13.	Q_1	Conservative Vs. Experimenting	0.0324	
14.	Q_2	Group-dependentVs.Self-sufficient	0.0672	*
15.	Q_3	UndisciplinedSelf-conflictVs. Controlled	0.0692	*
16	Q_4	Relaxed Vs. Tense	− 0.0599	*

* Significant at 0.05 Level.

** Significant at 0.01 Level.

Significance level has been tested against null hypothesis using two tailed test from the Fisher-Yate table as reproduced by H.M. Walker and J. Lev in their "Statistical Inference", New York : Henry Holt and Co. Table XI, P-70.

Entering in columns for .05 and .01 level of significance values expected for N=1200 technically (N=1200-2=1998) after interpolation are .060 and .079 respectively.

Discussion :

Table No. 4.18 shows that number of personality characteristics of students are significantly correlated with scholastic achievement. To be precise, out of sixteen personality factors nine of them are significantly correlated. Factor A,B,C and H are significantly correlated in positive direction at .01 level, while factor G, I, Q_2,Q_3 and Q_4 are significantly correlated at .05 level. Factor G, Q_2 and Q_3 are positively related while factor I and Q_4 are negatively related. Highly positive significant factors (.01level) are reserved Vs. outgoing', 'less intelligent Vs. more intelligent', 'affected by feelings Vs. emotionally stable' ,and 'shy Vs. venturesome'. An inference can be drawn from these four highly significant correlations that the persons who are outgoing, more intelligent, emotionally stable and venturesome are likely to get good grades .It can be said that the persons who get high scores on factor A having good scholastic achievement, possess the factors of outgoing, soft hearted, participating, good natured, kindly adaptable,

attentive to people and emotionally expressive. They are ready to cooperate and are soft hearted, adaptable, generous in personal relations and less afraid of criticism. They are able to remember the names of the people.

Another significant correlation is concerned with achievement and less intelligent Vs. more intelligent. The finding of the present study is confirmed by the studies of educationists and psychologists, that a large portion of scholastic achievement is determined by intelligence. On the basis of the obtained correlation (.2163) which is significant beyond .01 level, it can be inferred that those who are highly intelligent are likely to have good scholastic achievement. It means that the person, who is quick to grasp ideas, a fast learner and intelligent is likely to achieve better in the scholastic subjects.

It is also clear from table that factor C viz. 'affected by feelings Vs. emotionally stable', and factor H viz.," shy Vs. venturesome' are also significantly correlated in positive direction with scholastic achievement at .01 level. This leads us to conclude that a person who is emotionally stable and venturesome is likely to have better scholastic achievement. In other words, it can be said that rise in scores on these factors, would mean enhancement in scholastic achievement. Lower scores on these characteristics mean that a person who is more affected by feelings, shy in nature, having neurotic symptoms is likely to have poor scholastic achievement.

[116]

Factor Q_4, viz 'relaxed vs. tense' and factor I, viz, 'tough-minded vs. tender-minded' are also negatively correlated but at .05 level. It indicates that the female students who get high scores on these factors are likely poor in scholastic attainment. In other words, it can be said that the person who are tough-minded and relaxed, practical, realistic, independent, responsible, free from anxiety and tensions are likely to get better grades on scholastic achievement.

Table no. 4.18 also shows that out of nine significant correlation there are three more positive significant correlations. The level of significance of these three obtained correlations is .05 level. These are concerned with the personality characteristics of 'expedient Vs. conscientious', 'group-dependent Vs. Self-Sufficient', and 'undisciplined Vs. controlled'. This leads us to conclude that a person who is excitable in nature, conscientious, has the factor of self discipline and is temperamentally independent, accustomed to going his own way, making decisions and taking action on his own, is likely to have better scholastic achievement. In other words, it can be said that rise in scores in these characteristics, would mean enhancement in scholastic success. Lower scores on these characteristics mean that a person who is more expedient, group dependent and undisciplined is likely to have poor scholastic achievement.

[117]

Rest of the correlation between personality factor of E, F, L, M, N, O, Q_1 factors and scholastic achievement are insignificant and so, nothing definite can be said about their relationship.

The relationship between personality characteristics and scholastic achievement shown in table no. 4.18 is not pure. Intelligence, S.E.S. and values etc. being correlated with several other personality characteristics as revealed by inter correlation matrix and also with scholastic achievement to the extent of .01 level of significance, affect this relationship. The component of variability due to intelligence, S.E.S. and values etc should, therefore, to be partialled out, leaving correlations between personality factors and scholastic achievement unaffected by variability in intelligence, S.E.S. and values etc. The residual correlations may be considered roughly indicative of true relationship, that might be existing between personality factors and scholastic achievement.

Even these residual correlations may not be pure, being affected by variability in various other uncontrolled factors. Variables like environment, condition of work, study habits etc. and also the component of un-reliability in test-scores may be affecting these residual correlations. However, the major component of variability carried by intelligence has been taken out. The largest portion of variability in academic achievement is attributed to the factor of intelligence and S.E.S. Taking this

[118]

out, the remaining may be roughly, attributed to the contribution of personality factors.

4. Relationship Between Personality Factors and Academic Achievement After Partialling out Intelligence :

TABLE 4.19

COEFFICIENT OF CORRELATION BETWEEN 16 PERSONALITY TRAITS AND SCHOLASTIC ACHIEVEMENT AFTER PARTIALLING OUT INTELLIGENCE (N=1200)

S.No.	Factors	Name of the Factors	Coefficient of Correlation	Significance Level
1.	A	Reserved Vs. Outgoing	0.04629	
2.	B	Less Intelligent Vs. More Intelligent	0.04270	
3.	C	Affected by Feelings Vs. Emotionally Stable	00.03427	
4.	E	Humble Vs. Assertive	0.03107	
5.	F	Sober Vs. Happy-go-Lucky	0.01266	
6.	G	Expedient Vs. Conscientious	0.01342	
7.	H	Shy Vs. Venturesome	0.01196	
8.	I	Tough minded Vs. Tender-minded	−0.00978	
9.	L	Trusting Vs. Suspicious	0.05269	
10.	M	Practical Vs. Imaginative	0.03139	
11.	N	Forth right Vs. Shrewd	0.04392	
12.	O	Placid Vs. Apprehensive	0.01295	
13.	Q_1	Conservative Vs. Experimenting	0.02532	
14.	Q_2	Group-dependent Vs. Self-sufficient	0.04952	
15.	Q_3	Undisciplined Self-conflict Vs. Controlled	−0.07956	**
16	Q_4	Relaxed Vs. Tense		

** Significant at .01 level

Significance level has been tested against null hypothesis using two tailed test from the Fisher-yate table as reproduced by H.M.Walker and J. Lev in their "Statistical Inference", New

[119]

York : Henry Hold and Co. Table XI, P-70.

Entering in columns for .05 and .01 level of significance values expected for N=1200 technically (N=1200-2=1998) after interpolation are .060 and .079 respectively.

Discussion :

It may be observed in table No. 4.19 that when intelligence is partialled out, the relationship between personality traits and academic achievement has altogether altered from what it was when intelligence was not controlled. Out of the sixteen partialled correlation only one is found significant at .01 level and it is in the negative direction. Factor Q_4 is concerned with the personality trait of Relaxed - Tense. This negative correlation indicates that low anxiety tends to be associated with better grades. In other words, it can be said that a person who suffers from low anxiety or who feels relaxed is likely to get better grades than those who are anxiety-ridden. Cattell and Scheir have mentioned in the Hand Book for IPAT ANXIETY SCALE QUESTIONNAIRE that "achievement at any given educational level, as measured by goodness of school learning and grades, tends to bear slightly negative relationship with anxiety", Spielberger and Katzenmeyer have also proved

[120]

that anxiety is negatively correlated with academic achievement. Both of them assessed the relationship between the M.A.S. and grades for a sample of models divided into high, medium and low ability grouping. M.A.S. had low (-.18) negative correlation with grade point average for subjects in the medium ability group, but uncorrelated with grade for other ability groups. The findings of the present study are also confirmed the study of Reese, who studied fourth and sixth grade males and females and found that anxiety, as measured by C.M.A. Scale, was negatively related to scores on an achievement test in mathematics.

Rest of the correlations are not significant and thus nothing definite can be said whether any of these personality characteristics excepting Q_4 contribute to the academic achievement or not.

One interesting phenomenon, which has emerged out of computing this partial correlation is that all the correlations which were significant previously, turned out to be insignificant. It can be concluded from this that true relationship of personality with academic achievement, is, perhaps, tied with the level of intelligence, and, perhaps, factors of personality operated in different ways at different levels of intelligence as determinants of academic success.

5. Relationship Between Personality Traits and Scholastic Achievement After Partialling out S.E.S. :

TABLE 4.20

COEFFICIENTS OF PARTIAL CORRELATION BETWEEN PERSONALITY TRAITS AND ACADEMIC ACHIEVEMENT PARTIALLED OUT S.E.S. :

S.No.	Factors	Name of the Factors	Coefficient of Correlation	Significance Level
1.	A	Reserved Vs. Outgoing	0.09986	**
2.	B	Less Intelligent Vs. More Intelligent	0.02043	**
3.	C	Affected by Feelings Vs. Emotionally Stable	0.07621	*
4.	E	Humble Vs. Assertive	0.02615	
5.	F	Sober Vs. Happy-go-Lucky	0.04932	
6.	G	Expedient Vs. Conscientious	0.05216	
7.	H	Shy Vs. Venturesome	0.02912	
8.	I	Tough minded Vs. Tender-minded	− 0.07516	*
9.	L	Trusting Vs. Suspicious	0-05427	
10.	M	Practical Vs. Imaginative	0-04092	
11.	N	Forth right Vs. Shrewd	0-02192	
12.	O	Placid Vs. Apprehensive	0-03257	
13.	Q_1	Conservative Vs. Experimenting	0.02142	
14.	Q_2	Group-dependent Vs. Self-sufficient	0.05163	
15.	Q_3	Undisciplined Self-conflict Vs. Controlled	0.00394	
16	Q_4	Relaxed Vs. Tense	−0.10489	**

** Significant at .01 level

* Significant at .05 level

Significance level has been tested against null hypothesis using two tailed test from the Fisher-Yate table as reproduced by H.M. Walker and J. Lev in their" Statistical Inference", New York : Henry Holt and Co. Table XI, P-70.

[122]

Entering in columns for .05 and .01 level of significance values expected for N=1200 technically (N=1200-2=1998) after interpolation are .060 and .079 respectively.

Discussion :

Table No. 4.20 shows that a number of personality traits are significantly correlated with academic achievement. They are "reserve-outgoing" "less intelligent-more intelligent", "tough minded-tender minded", "affected by feeling-emotionally stable" and "relaxed-tense". Out of these "reserved-outgoing", "less intelligent-more intelligent" and "relaxed-tense" are significant at .01 level, and "affected by feeling-emotionally stable", and "tough minded-tender minded" are significant .05 level. The analysis shows that if S.E.S. is controlled, the personality trait of "out-going" and "more intelligent" play a highly significant role in contributing to academic achievement.

Again, from the table we find that academic achievement is perhaps adversely affected by the personality trait of "relaxed-tense". The correlation obtained between this trait and academic achievement is -0.10489. That means that feelings of frustration, excitedness, restlessness, impatience, and fatigue stand in the way of good academic achievement. On the other hand it can also be said that the tendency of feeling relaxed and satisfaction may contribute to better academic achievement as indicated by partial r (-0.10489). It can also be inferred from this partial "r" that true relationship of personality with

[123]

academic achievement is also related with S.E.S., and perhaps this characteristic of personality operates in different ways at different levels of socio-economic status. In the case of this personality trait partialling out of S.E.S. has increased the value of 'r'.

The remaining two correlations, which are concerned with "tough mindedness-tender mindedness" and the trait of "affected by feelings-emotionally stable" are significant at .05 level. One thing should be noted in this connection that when S.E.S. is partialled out, the correlation obtained between personality traits of 'tough minded-tender minded' is increased at the third decimal place. In the same way the correlation is also increased between the traits of affected by "feelings-emotionally stable" and academic achievement at the second decimal place. It can be inferred that S.E.S. is tied with these two personality characteristics, which stand in the way of good academic-achievement.

It may be concluded that the differences in the personality characteristics of the individual interact with characteristics of social environment in affecting academic performance. Thus certain personality characteristics may lead to high achievement in some social settings but not in others and some kind of social environment may be conducive to high academic achievement for certain types of personality but not for others.

[124]

6. Relationship between Personality Factors and Academic Achievement, Partialling out Intelligence and S.E.S. :

TABLE 4.21

COEFFICIENTS OF CORRELATION BETWEEN PERSONALITY FACTORS AND ACADEMIC ACHIEVEMENT, S.E.S. AND INTELLIGENCE PARTIALLED OUT (N=1200)

S.No.	Factors	Name of the Factors	Coefficient of Correlation	Significance Level
1.	A	Reserved Vs.Outgoing	0.03554	
2.	B	Less IntelligentVs. More Intelligent	0.03576	
3.	C	Affected by Feelings Vs. Emotionally Stable	–0.06887	*
4.	E	Humble Vs. Assertive	0.00571	
5.	F	Sober Vs. Happy-go-Lucky	0.00231	
6.	G	Expedient Vs.Conscientious	0.01955	
7.	H	Shy Vs. Venturesome	0.02958	
8.	I	Tough minded Vs. Tender-minded	0.05721	
9.	L	Trusting Vs. Suspicious	0.01089	
10.	M	Practical Vs. Imaginative	0.02618	
11.	N	Forth right Vs. Shrewd	0.04657	
12.	O	Placid Vs. Apprehensive	0.09762	
13.	Q_1	Conservative Vs. Experimenting	0.05241	
14.	Q_2	Group-dependentVs.Self-sufficient	0.04324	
15.	Q_3	UndisciplinedSelf-conflictVs. Controlled	0.06023	
16	Q_4	Relaxed Vs. Tense ·	–0.06974	**

* Significant at .05 level.

** Significant at .01 level.

Significance level has been tested against null hypothesis using two tailed test from the Fisher-Yate table as reproduced by H.M. Walker and J. Lev in their' Statistical Inference", New York : Henry Holt and Co. Table XI, P-70.

Entering in columns for .05 and .01 level of significance values expected for N=1200 technically (N=1200-2=1998) after interpolation are .060 and .079 respectively.

Discussion :

The correlations obtained between personality traits and academic achievement after partialling out both intelligence and S.E.S. reveal that out of 16 partial correlation only one is significant at .01 level and another at .05 level. They are between academic achievement and the traits of "relaxed-tense" and "affected by feelings-emotionally stable". The obtained correlations are in the negative direction which indicates that higher the scores on the characteristics of "relaxed-tense" the poorer will be the academic achievement. Conversely, it can be said that as long as the individual is free anxiety he stands better chances of securing good grades in academic studies.

Another correlation which is significant at .05 level indicates that the trait of "affected by feelings-emotionally stable", is related to academic achievement. As the obtained correlation is negative, it can be inferred that a person, who gets low scores on this trait is likely to be better in academic achievement.

One interesting thing has emerged out of this analysis. After partialling out the effect of intelligence and S.E.S., the value of 'r' has increased. (Relaxed-Tense). Previously when

correlation between this personality trait and academic achievement was calculated, when S.E.S. and intelligence were allowed to vary, the obtained correlation was –.0599 which was touching the lower limit of .05 level of significance. Now it has been increased to .01 level of significance.

It can be concluded that the true relationship of personality with academic achievement is perhaps closely tied with the level of intelligence and S.E.S., and factors of personality operate in different ways at different levels of intelligence and S.E.S. as determinants of academic success.

PART-B

STUDY OF VALUES AND SCHOLASTIC ACHIEVEMENT :

1. Study of Distribution of Scores on Values of Girls with the Help of Frequency Distribution :

TABLE 4.22
FREQUENCY DISTRIBUTION OF SCORES ON PERSONAL VALUE (P)
(N=1200)

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	35-39	20	1200	1.67	100.00
2	30-34	80	1180	6.66	98.33
3	25-29	260	1100	21.67	91.67
4	20-24	580	840	48.33	70.00
5	15-19	240	260	20.00	21.67
6	10-14	20	20	1.67	1.67

Mean = 21.25, Median = 21.70, S.D. = 5.54 Skewness = 0.22, Kurtosis = 0.272, Standard Error of Mean = 0.70

[127]

Discussion :

Table No. 4.22 representing the distribution of scores of female subjects on personal value scale shows that the distribution is almost symmetrical. From table, it can also be seen that mean and median do not widely differ from each other. The value of skewness is insignificant since it is not very far away from Zero. The value of kurtosis is also very much close to the meso-kurtic curve. The obtained value of standard error of mean shows that the probability is 0.99 that our sample mean does not miss the population mean by more than ±1.806.

TABLE 4.23

FREQUENCY DISTRIBUTION OF SCORES ON RELIGIOUS VALUE (R)

(N= 1200)

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	35-39	160	1200	3.33	100.00
2	30-34	360	1040	30.00	86.67
3	25-29	440	680	36.67	56.67
4	20-24	200	240	16.67	20.00
5	15-19	40	40	3.33	3.33

Mean = 28.67, Median = 28.59, S.D. = 6.35, Skewness = 0.04, Kurtosis = 0.296, Standard error of mean = 0.82

Discussion :

Table no. 4.23 represents the distribution of scores of female subjects on religious value scale. The distribution reveals almost to be symmetrical. The mean and median almost concide with each other. The value of skewness is very close to zero.

[128]

The distribution is slightly platykurtic, but does not deviate so much that it can prohibit the use of product-moment method. Hence, the above distribution is almost normal.

Low standard error of mean shows that the sample mean is fairly close to population mean.

TABLE 4.24

FREQUENCY DISTRIBUTION OF SCORES ON EDUCATIONAL VALUE(E_1)

(N=1200)

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	45-46	120	1200	10.00	100.00
2	40-44	320	1080	26.66	90.00
3	35-39	440	760	36.67	63.33
4	30-34	240	320	20.00	26.67
5	25-29	80	80	16.67	6.67

Mean = 37.66, Median = 37.68, S.D. = 5.25, Skewness = -0.01, Kurtosis = 0.238, Standard error of mean = 0.68

Discussion :

Table no. 4.24 represent the performances of educational value of female subjects on value scale. The distribution appears to be normal. The evidences of normality being : (1) Mean and median are the same, (2) The value of skewness is almost zero,(3) The distribution is slightly leptokurtic but the value of kurtosis does not much deviate from the mesokurtic curve.

[129]

The value of standard error of mean indicates that the sample mean is very much close to population mean.

<div align="center">

TABLE 4.25

FREQUENCY DISTRIBUTION OF SCORES ON MATERIALISTIC VALUE (M_1)

(N=1200)

</div>

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	30-34	120	1200	10.00	100.00
2	25-29	320	1080	26.67	90.00
3	20-24	440	760	36.66	63.33
4	15-19	240	320	20.00	26.67
5	10-14	80	80	6.67	6.67

Mean = 23.00, Median = 22.84, S.D. = 4.9, Skewness = 0.098, Kurtosis = 0.283, Standard error of mean = 0.63

Discussion :

Table No. 4.25 indicates that the frequency distribution representing the performances of scores of female subjects on materialistic value scale is almost symmetrical. It may be also observed from table that mean and median does not differ too much from each other. The value of skewness is very close to zero. The value of kurtosis is very near to the mesokurtic curve. Hence, the distribution is normal. The obtained value of standard error of mean shows that the probability is .01 that our sample mean does miss the population mean by more than

± 1.62

TABLE 4.26

FREQUENCY DISTRIBUTION OF SCORES ON SOCIAL VALUE (S)

(N=1200)

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	45-49	40	1200	3.33	100.00
2	40-44	0	1160	0.00	96.66
3	35-39	560	1160	46.67	96.66
4	30-34	520	600	43.33	50.00
5	25.29	80	80	6.67	6.67

Mean = 34.5, Median = 34.5, S.D. = 3.8, Skewness = 0, Kurtosis = 0.282, Standard error of mean = 0.49

Discussion :

The above frequency distribution represents the distribution of scores of female subjects on social value scale. It reveals that the distribution is symmetrical. The value of skewness is zero. The mean and median are the same. The peakedness of the distribution is also very close to a mesokurtic curve. Hence, the above distribution almost tends to be normal.

The standard error of mean shows that the probability is .01 that our sample mean does miss the population mean by more than ± 1.26.

[131]

TABLE 4.27

FREQUENCY DISTRIBUTION OF SCORES ON HUMANISTIC VALUE (H_1)

(N=1200)

S.No.	Scores	f.	cum.f.	f.%	cum.f.%
1	40-44	240	1200	20.00	100.00
2	35-39	480	960	40.00	80.00
3	30-34	440	480	36.67	40.00
4	25-29	40	40	3.33	3.33

Mean = 35.84, Median = 35.75, S.D. = 3.8, Skewness = 0.06,

Kurtosis = 0.218, Standard error of mean = 0.49

Discussion :

Table no. 4.27 representing the distribution of scores of female subjects on humanistic value scale indicates that the distribution is normal, since the distribution is almost symmetrical. Mean and median are almost same. The value of skewness is not significant and is very close to zero. The distribution is slightly leptokurtic but it does not much deviate from the characteristics of mesokurtic curve.

The low standard error of mean shows that the sample mean is very much close to the population mean.

[132]

ii- Relationship Between Values and Academic Achievement :

TABLE 4.28
COEFFICIENT OF CORRELATION BETWEEN VALUES AND
ACADEMIC ACHIEVEMENT
(N=1200)

S.No.	Name of the Values		Coefficients of Correlation	Level of Significance
1	Personal	(P)	0.05958	
2	Religious	(R)	–0.22456	**
3.	Educational	(E_1)	0.08979	*
4.	Materialistic	(M_1)	–0.07835	*
5.	Social	(S)	0.01917	**
6.	Humanistic	(H_1)	0.03494	

**Significant at .01 level.

* Significant at .05 level.

Discussion :

Tale no. 4.28 represent coefficients of correlation between six values and academic achievement for female subjects. Four values out of six are significantly correlated with attitudes. They are religious, educational, materialistic and social. It can be inferred that the subjects who are more religious and materialistic get low scores. Since, these two values are negatively correlated. On the other hand, educational and social values are positively related with attitudes. It can be said that female subjects who get high scores on educational and social value scale, are good in attainment. The religious and social values are significant at .01 level while the educational and materialistic values are significant at .05 level. In brief, it can

[133]

be said that more educated and social female subjects are good in academic attainment., while more religious and materialistic female subjects do not possess good academic records. Above these correlations clearly indicate that above four values contribute to high school girls academic attainment.

Rest of the correlations between values($P\&H_1$) and achievement female students are in significant, so nothing definite can be said about their relationship.

iii- Relationship between Values and Scholastic Achievement Partialling Out Intelligence :

TABLE : 4.29

COEFFICIENT OF PARTIAL CORRELATION BETWEEN VALUES AND ACADEMIC ACHIEVEMENT INTELLIGENCE BEING PARTIALLED OUT.

(N=1200)

S.No.	Name of the Values		Coefficients of Correlation	Level of Significance
1	Personal	(P)	0.04923	
2	Religious	(R)	−0.19324	**
3.	Educational	(E₁)	0.07965	**
4.	Materialistic	(M₁)	−0.06725	*
5.	Social	(S)	0.12032	**
6.	Humanistic	(H₁)	−0.02112	

**Significant at .01 level.

* Significant at .05 level.

[134]

Discussion :

It may be observed from table no. 4.29 that some of the coefficients of partial correlation between values and attainment of female subjects, when intelligence is partialled out are significant four values out of six are significantly correlated with academic achievement. Religious and social values are significant at .01 level, while educational and materialistic values are significant at .05 level. Educational and social values are positively correlated with attainment. It can be infeired that all female subjects, who are educated and social, possess good academic record.

On the other hand, religious and materialistic values have negative association with academic achievement. It can be said that the females who are more religious and materialistic are poor in academic attainment.

Inference can be drawn that true relationship between values and scholastic achievement change is, perhaps tied with the personality factors; personality factors may operate concurrently with values as a mediating factor to accentuate its relation with academic achievement.

iv- Relationship between Values and Academic Achievement, S.E.S. Partialled Out :

[135]

TABLE 4.30

COEFFICIENTS OF PARTIAL CORRELATION BETWEEN VALUES AND SCHOLASTIC ACHIEVEMENT, S.E.S. BEING PARTIALLED OUT

(N=1200)

S.No.	Name of the Values		Coefficients of Correlation	Level of Significance
1	Personal	(P)	0.04234	
2	Religious	(R)	−0.18324	**
3.	Educational	(E$_1$)	0.07629	*
4.	Materialistic	(M$_1$)	−0.06421	*
5.	Social	(S)	0.12351	**
6.	Humanistic	(H$_1$)	0.02413	

** Significant at .01 level.

* Significant at .05 level.

Discussion :

Table No. 4.30 represent the coefficient of partial correlation between values and achievement of female subjects, when S.E.S. is being partialled out. Though, partialling out the S.E.S. does not affect the kind and direction of the correlations of values with achievement from what it was when S.E.S. was not controlled, yet it has affected its magnitude. So, it can be said again that the female subjects who are more educated and more social tend to get good academic record, while on the other hand the female subjects who are more religious and money minded, have poor academic attainment.

[136]

v- Relationship between Value and Academic Achievement Partialling Out Intelligence and S.E.S.

TABLE 4.31

COEFFICIENT OF PARTIAL CORRELATION BETWEEN VALUES AND ACADEMIC ACHIEVEMENT INTELLIGENCE AND S.E.S. BEING PARTIALLED OUT.

(N=1200)

S.No.	Name of the Values		Coefficients of Correlation	Level of Significance
1	Personal	(P)	0.03216	
2	Religious	(R)	–0.06914	*
3.	Educational	(E_1)	0.06621	*
4.	Materialistic	(M_1)	–0.06123	*
5.	Social	(S)	0.07324	*
6.	Humanistic	(H_1)	0.02117	

** Significant at .01 level

*Significant at .05 level.

Discussion :

Table no. 4.31 indicates the coefficients of partial correlation between values and academic achievement of female subjects, when intelligence and S.E.S. is being controlled. Partial analysis have altered the level of correlations of values with attainment as it was in table no. 4.30. Hence, the results of the previous table are again confirmed that the females who are more educated and social tend to get good academic record while the females who are more religious and materialistic do not get good scores.

[137]

PART-C
PREDICTION OF ACADEMIC ACHIEVEMENT (D.V.) BY COMBINING PERSONALITY FACTOR AND VALUES (I.V.S)

In the foregoing pages, the investigator tried to predict academic achievement on the basis of single isolated values but the crucial point is that the use of isolated personality traits and other variables may not always be fruitful. The combined effect of all the traits and values should also be assessed at the time of prediction scholastic achievement. The fact can not be ignored that at the time of predicting achievement isolated factors do not operate. Several other factors also work simultaneously in contributing to achievement.

As a matter of fact the independent variables (personality traits and values) do not react in isolation. All of them, either, contribute in enhancing academic achievement not in isolation, but in combination with other variables or they may be showing a decreasing trend in contributing achievement by interaction of each variable. These things led the investigator to search the maximum possibilities of prediction on the basis of all personality traits and values.

The Coefficients of partial regression, standard error, beta coefficients, corresponding variance ratio of each coefficient, coefficient of corrected multiple correlation, fiduciary limits at .05 and .01 level, coefficient of alienation(K), coefficient of forecasting efficiency(E) and coefficient of determination have been calculated at the Computer Centre of "Council for social Development" 53 Lodi Estate, New Delhi, and presented in table No. 4.32.

[138]

COEFFICIENTS OF PARTIAL REGRESSION... WITH TWENTY-TWO INDEPENDENT VARIABLES

Dependent Variables : Academic Achievement. Degree of Freedom (1200-23) = 1177, N= 1200

S.No	Name of Independent Variables	Coefficients of Partial Regression (b)	Standard Error of Each Variables	Beta Coefficients (B)	Variance Ratio (F)	Coefficient of Multiple Correlation (R)	Square of Multiple Correlation (R^2)	Corrected Multiple Correlation $(\bar{R}_C)$	Coefficient of Determination (R^2_C)	Fiduciary Limits of .05 & .01 level	Coefficient of Alienation (K)	Coefficient of Forecasting Efficiency (E)
1	Personality Factors (A)	0.73433	0.04389	0.20150	2.779**							
2	Personality Factors (B)	0.37583	0.03446	0.08394	0.476							
3	Personality Factors (C)	-0.10071	0.03275	-0.04429	0.096							
4	Personality Factors (E)	-0.39780	0.03722	-0.12365	1.142							
5	Personality Factors (F)	-0.50320	0.03926	-0.00174	0.000							
6	Personality Factors (G)	0.13836	0.04428	0.37631	9.764**							
7	Personality Factors (H)	0.19554	0.04126	0.06758	0.226							
8	Personality Factors (I)	0.44496	0.03644	0.01342	0.015							
9	Personality Factors (L)	-0.80659	0.04242	-0.22088	3.616**	0.83911	0.70410	0.81406	0.66270	0.761 to 0.866 at .05 level	0.5807	41.93%
10	Personality Factors (M)	-0.38643	0.03801	-0.10498	1.033					0.744 to 0.883 at 0.01 level		
11	Personality Factors (N)	-0.21189	0.04027	-0.57680	0.277							
12	Personality Factors (O)	0.21377	0.03276	0.08798	0.426							
13	Personality Factors (Q_1)	0.10067	0.03462	0.30758	8.506**							
14	Personality Factors (Q_2)	0.10548	0.03663	0.32028	8.340**							
15	Personality Factors (Q_3)	0.36760	0.04190	0.11182	0.770							
16	Personality Factors (Q_4)	-0.60216	0.03233	-0.02671	0.035							
17	Personal Value (P)	-0.11831	0.07907	-0.59120	0.022							
18	Religions Value (R)	0.52745	0.07392	0.38077	0.609							
19	Educational Value (E_1)	0.60537	0.07014	0.28102	0.007							
20	Materialistic Value (M_1)	0.86596	0.07521	0.05436	0.013							
21	Social Value (S)	-0.17037	0.09276	-0.62160	0.034							
22	Humanistic Value (H_1)	-0.17782	0.08633	-0.08003	0.042							

Constant Value = 0.64176

** Significance level has been tested against null hypothesis using F test from Table F as reproduced by H.E. Garrett in his, "Statistics in Psychology and Education" Bombay, sixth Edition, 1971,pp. 463 to 466. F value for .05 level of Significance is 1.29 and for .01 level is 1.43 for degrees of freedom 22 for Greater mean square and 1177 for Smaller mean square.

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Discussion :

It is clear from table no. 4.32 that the partial regression coefficients of personality traits of A,G,L,Q_1 and Q_2 of female subjects are statistically significant at .01 level as their 'F' values indicate while those of personality traits B, C, E, F, H, I,M,N,O, Q_3, Q_4 and values P, R, E_1, M_1, S, H_1 of male subjects are not significant.

The value of corrected $\bar{R}^2c$ for inflation (coefficient of determination) being 0.6627, it can be inferred that about 66% of variance of achievement of female subjects is associated with variability in twenty two independent variables taken together. Rest 34% remains unexplored. Moreover to this fiduciary limits at .01 level also indicate that the multiple coefficient of correlation is significant at .01 level. The value of multiple 'R' lies between the range of fiduciary limits that is from 0.74 to 0.88.

The Coefficient of alienation and forecasting efficiency indicate that all twenty-two independent variables do not contribute jointly more than 41.93% in predicting academic achievement of girls students, Now if we want to predict the achievement of any individual in score form, the entire regression equation can be read as :

$$Y = a + b_1 X_1 A + b_2 X_2 B + \ldots\ldots + b_{22} X_{22} H_1$$
$$Y = 0.64176 + .7343 X_1 A + .3758 X_2 B - .1007 X_3 C$$

[140]

$$-.3978 \ X_4 \ E - .5032 \ X_5 \ F + .1383 \ X_6 \ G$$

$$+ .1955 \ X_7 \ H + .4449 \ X_8 \ I - .8065 X_9 \ L$$

$$- .3864 \ X_{10} \ M - .2118 \ X_{11} \ N + .2137 \ X_{12}$$

$$+ .1006 \ X_{13} \ Q_1 + .1654 \ X_{14} Q_2 + .3676 \ X_{15} \ Q_3$$

$$- .6021 \ X_{16} Q_4 - .1183 \ X_{17} P + .5274 \ X_{18} \ R$$

$$+ .6021 X_{19} E_1 + .8659 \ X_{20} M_1 - .1703 \ X_{21} S$$

$$-.1778 \ X_{22} H_1$$

To interpret the above equation we may say that for every unit increase in $X_1 A$, $X_2 B$, $X_6 G$, $X_7 H$, $X_8 I$, $X_{12} O$, $X_{13} \ Q_1$, $X_{14} \ Q_2$, $X_{15} Q_3$, $X_{18} R$, $X_{19} E$, $X_{20} M_1$, Y increased by .7343, .3758, .1383, .1955, .4449, .2137, .1006, .1054, .3676, .5274, .6021, .8659 units respectively - and for every unit increase in $X_3 \ C$, $X_4 \ E$, $X_5 \ F$, $X_9 \ L$, $X_{10} M$, $X_{11} \ N$, $X_{16} \ Q_4$, $X_{17} \ P$, $X_{21} \ S$, $X_{22} \ H_1$, Y decreases by .1007, .3978, .5032, .8065, .3864, .2118, .6021, .1183, .1703, .1778 units respectively.

Since the multiple regression equation in score form gives weights to be attached to the scores in X_1, X_2, X_3, X_4 .... and X_{22}. These weights tell us the amount by which scores in X_1, X_2, ...X_{22} must be multiplied in order to give the best prediction of Y but these weights do not give us the relative importance of all twenty-two independent variables in determining the academic achievement. This information is given by the beta coefficients by which we are able to determine the independent contribution of our independent variables (I.Vs.) for predicting dependent variables since our

tests have been expressed in standard scores (all means 0.00 and σ's = 1.00). Hence, the multiple regression equation in terms of the beta coefficients is given as below :

$$Z = .2015\ Z_1A + .0839\ Z_2B - .0442\ Z_3C - .1236\ Z_4E$$
$$-.0017\ Z_5F + .3763\ Z_6G + .0675\ Z_7\ H + .0134\ Z_8I$$
$$- .2208\ Z_9L - .1049\ Z_{10}M - .0575\ Z_{11}\ N + .0879\ Z_{12}O$$
$$+ .3075\ Z_{13}Q_1 + .3202\ Z_{14}\ Q_2 + .1118\ Z_{15}Q_3 - .0267\ Z_{16}Q_4$$
$$- .0591\ Z_{17}\ P + .3807\ Z_{18}R + .281 Z_{19}E_1 + .0543\ Z_{20}M_1$$
$$- .0621\ Z_{21}S - .0800\ Z_{22}H_1$$

Beta coefficient give the independent contribution of all twenty-two independent variables viz. sixteen personality traits A,B,C, E,F, G, H, I,L, M, N, O, Q_1, Q_2, Q_3 and Q_4 and all six values P, R, E_1, M_1, S & H_1 in predicting the academic achievement of girls.

The comparison between these two above regression equations in different form clearly indicates that the multiple regression equation in score form gives the weights to be attached to the scores in $X_1, X_2,$ .... and X_{22}. These different weights tell us the amount by which scores in $X_1, X_2,$ ....and X_{22} must be multiplied in order to give the "best" prediction of Y. But these weights do not give us the relative importance of

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values and personality traits in determining the academic achievement. This information is given by the beta weights. For example, it is of interest to note, that, while the actual score weights attached to factor A & B are as 2:1 approximately (.7343 to .3758), the independent contribution of personality factors A & B are in the ratio .2015 to .0839 or as 5:2 approximately. In any other example, it may also happened that this ratio 2:1 (weights attached in score form to two variables) may be reversed in the case of regression equation in the form of beta coefficients.

The conclusion, therefore is that only five personality factors A, G, L Q_1 & Q_2 are significantly correlated with attitudes. These factors have significant roles for determining the academic achievement of X Class girls. Rest personality factors and values have no significant association with achievement and hence nothing definite can be said about their contribution in predicting academic attainment.

PART-D
COMPARATIVE STUDY OF THE PERSONALITY TRAITS OF HIGH AND LOW ACADEMIC ACHIEVERS :

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Comparative Study of Personality Factors of High and Low Scholastic Achievers with the Help of Critical Ratio.

Before comparing the two group of high and low scholastic achievers, it would not be out of the point to define the term high and low scholastic achievers.The term high achievers for the purposes of the present study refers to subjects earning a composite average score on scholastic achievement test which is above mean + 1σ for the score distribution for scholastic achievement. The term low scholastic achievers on the other hand refers to those whose composite average scholastic achievement score were below mean– 1σ for the distribution of scholastic achievement scores. In other words, it canbe said that the students who obtained above than 65% of the marks have been named as high achievers and those who scored below 45% of the marks have been placed in low achievers category.

The table No. 4.33 gives the data obtained by high and low achievers on various personality factors studied with the help of personality Questionnaire.

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Comparative Study of the Personality Factors of High and Low Achievers :

TABLE 4.33

COMPARISON WITH MEAN SCORES ON PERSONALITY FACTORS BETWEEN HIGH & LOW ACHIEVERS OF FEMALE STUDENTS

HIGH ACHIEVERS (N=150)

LOW ACHIEVERS (N=210)

S.No.	Name of the Personality Factors		Low Achievers		High Achievers		C.R.
			Mean	S.D.	Mean	S.D.	Value
1	Reserved Vs.Outgoing	(A)	6.910	1.570	8.410	1.110	2.340 **
2	Less IntelligentVs. More Intelligent	(B)	3.300	1.180	5.400	1.410	3.180 **
3	Affected by Feelings Vs. Emotionally Stable	(C)	7.500	1.560	7.570	2.416	0.106
4	Humble Vs. Assertive	(E)	4.100	1.757	4.570	1.990	0.610
5	Sober Vs. Happy-go-Lucky	(F)	8.100	0.540	7.710	1.014	1.220
6	Expedient Vs.Conscientious	(G)	9.700	1.004	10.930	0.870	3.129 **
7	Shy Vs. Venturesome	(H)	5.500	1.910	7.430	1.039	2.906 **
8	Tough minded Vs. Tender-minded	(I)	7.200	1.660	5.500	1.760	2.407 **
9	Trusting Vs. Suspicious	(L)	5.400	2.009	5.070	1.620	0.428
10	Practical Vs. Imaginative	(M)	7.400	2.009	7.000	3.069	0.038
11	Forth right Vs. Shrewd	(N)	5.800	2.990	6.500	1.670	0.668
12	Placid Vs. Apprehensive	(O)	8.400	1.959	8.210	1.676	0.250
13	Conservative Vs. Experimenting	(Q_1)	7.300	2.195	10.000	1.360	3.448 **
14	Group-dependentVs.Self-sufficient	(Q_2)	4.200	1.469	5.930	1.270	3.008 **
15	UndisciplinedSelf-conflictVs. Controlled	(Q_3)	6.200	2.740	8.170	1.288	2.118 **
16	Relaxed Vs. Tense	(Q_4)	7.600	2.640	4.860	1.345	3.014 **

** Significant at 0.01 Level.

Significance level has been tested against null hypothesis using two tailed test from table D of Henry-E. Garrett in his book named "Statistics in Psychology and Education", Vakils Feffer and Simon Private Ltd., 18 Ballard Estate, Bombay-1, India P.461. Entering in Columns for 0.05 and 0.01 level of

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significance CR value expected for df.(150+210-2) = 358 after interpolation are 1.29 and 1.43 respectively.

Discussion :

Above table 4.33 gives a comparative study of the performances of high achievers and low achievers female students on Cattell 16 P.F. Questionnaire in terms of means and standard deviations. Table represents that out of the sixteen C.R. ratios, calculated to study the significance of differences of means, nine are significant and seven are insignificant. All the significant CR ratios, are significant at .01 level of significance. The significant CR ratios are for the factors reserved Vs. outgoing, less intelligent Vs. more intelligent, expedient Vs. conscientious, shy Vs. venturesome, tough-minded Vs. tender-minded, conservative Vs. experimenting, group dependent Vs. self-sufficient, undisciplined Vs. controlled and relaxed Vs. tense. Here too, the means of low achievers are comparatively more on the significant factors of tough-minded tender-minded, relaxed-tense whereas on the rest seven significant factors, their means are lower as compared to the means of the high achievers. From this we draw the following inferences :

1. Low achievers female students are reserved, less intelligent, expedient, shy, conservative, group dependent and undisciplined where as high achievers are outgoing, more intelligent, conscientious, venturesome, experimenting, self sufficient and controlled.

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2. Low achievers are tender-minded and tense whereas high achievers are tough-minded and relaxed.

3. On the factors affected by feelings - emotionally stable humble-assertive, sober-happy-go-lucky, trusting-suspicious, practical-imaginative, forthright-shrewd and placid-apprehensive, the two groups represent more or less the same performances since they show the insignificant differences among their means. The apparent differences among the means of the two groups are due to the sampling fluctuations only and hence, there is no real or true difference between the population means.

2. Comparative Study of Values of High & Low Achievers

TABLE 4.34

GAINS IN SCORES ON VALUES BY THE HIGH AND LOW ACHIEVERS :

HIGH ACHIEVERS (N = 150)

LOW ACHIEVERS (N = 210)

S.No.	Name of the Values		Low Achievers		High Achievers		C.R.
			Mean	S.D.	Mean	S.D.	Value
1	Personal Value	(P)	22.61	4.49	18.61	3.00	1.18
2	Religious Value	(R)	24.42	4.80	31.23	1.17	2.75 **
3	Educational Value	(E₁)	40.23	3.86	36.64	4.03	1.42 *
4	Materialistic Value	(M₁)	21.82	6.43	25.42	2.87	1.16
5	Social Value	(S)	31.81	2.32	30.62	3.38	3.52 **
6	Humanistic Value	(H₁)	33.22	5.91	35.61	3.99	0.67

** Significant at .01 level

* Significant at .05 level.

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Significance level has been tested against null hypothesis using two tailed test from table D of Henry-E. Garrett in his book named "Statistics in Psychology and Education", Vakils Feffer and Simon Private Ltd., 18 Ballard Estate, Bombay-1, India P.461. Entering in Columns for 0.05 and 0.01 level of significance CR value expected for df.(150+210-2) = 358 after interpolation are 1.29 and 1.43 respectively.

Discussion :

Above table gives a comparative study of the performances of high achievers and low achievers on PVQ in terms of means and standard deviations. Table 4.34 represent that out of six critical ratios calculated to study the significance of differences between two means, only three values are significant and rest three are insignificant. Out of the three significant critical ratios, two are significant at .01 level while the rest one is significant at .05 level. The significant critical ratios are for the values- Religious, Educational and Social. Here, the means of low achievers are comparatively more on the significant religious value whereas on the rest two significant values viz. Educational and Social, their means are lower as compared to means of high achievers. From this we draw the following conclusions :

1.   High achievers are more educational and social.

2.   Low achievers are more religious.

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3. On values P, M_1 and H_1, two group performances are somewhat different due to sampling fluctuation since the groups are insignificant at both the levels. Hence, there is no real or true differences between the population mean. The apparent difference between the means of two groups are due to the sampling error only.

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CHAPTER-V

Findings and Conclusions :

The previous chapter includes the analysis and interpretation of the data in connection with the relation of scholastic achievement on the basis of personality factors and values. It becomes, therefore, necessary to summarize here the conclusions resulting from the investigation. This chapter starts with the answers to the hypotheses that were framed in connection with this investigation.

Hypotheses Tested :

Hypothesis No. 1 (a) states that :

"There is no significant correlation between personality factors and scholastic achievement of female students.

The research findings in the case of female subjects are the following :

Out of sixteen personality factors only five are significantly correlated beyond .01 level of significance, they are as follows :

1.   Reserved Vs. Outgoing.

2.   Less-intelligent Vs. More Intelligent.

3.   Affected by Feelings Vs. Emotionally Stable.

4.   Shy Vs. Venturesome

5.   Relaxed Vs. Tense.

Personality factors relaxed Vs. tense is negatively correlated while the rest four are correlated in positive direction. Thus, it can be said that these five sub-hypotheses stand rejected at .01 level.

The other four personality factors which are significantly related at .05 level of significance are as follows :

1.   Expedient Vs. Conscientious.

2.   Tough minded Vs. Tender minded.

3.   Group dependent V. Self-sufficient.

4.   Undisciplined Vs. Controlled.

Personality factor, viz., tough minded Vs. tender-minded is correlated in negative direction while the rest three are positively correlated. Thus, it can be concluded that these four sub-hypotheses related to these factors stands rejected at 0.05 level. Rest seven factors, viz., factor E, F, L,M,N,O and Q_1 are not significantly correlated with scholastic attainment.

In short it can be said that hypothesis no.1 (a) for female students is partly rejected and partly accepted.

Hypothesis No. 1 (b) States that :

"The relationship of different personality traits with academic achievement does not exist significantly when intelligence is held constant."

Out of the sixteen coefficient of correlation only one is significant at .01 level in negative direction. This trend is concerned with 'Relaxed–Tense', so it can be said that the hypothesis No. 1(b) is partly accepted but mostly rejected.

Hypothesis No.1(c) states that :

"There is no significant relationship between personality traits and academic achievement when S.E.S. is hold constant."

The finding in this connection is that three coefficient of correlations are significant at .01 level and two at .05 level. These findings show that the personality traits of 'Reserve-Outgoing', 'Less Intelligent-More Intelligent', 'Relaxed-Tense', do correlate with academic achievement. Thus, the hypothesis No. 1(C) is partly rejected. Again, the personality traits of 'Affected by Feelings-Emotionally stable', 'Tough minded - Tender minded are significantly correlated .05 level. Again hypothesis No. 1(C) is rejected at .05 level.

On the whole, it can be said when S.E.S. is held constant hypothesis no. 1(C) is partly accepted and partly rejected.

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Hypothesis No.1(d) states that :

"The significant relationship does not exist between personality factors and academic achievement when S.E.S. and intelligence both are hold constant" Out of sixteen correlations only two coefficient of correlations are significant. One is significant at .05 level which is concerned with the personality traits, 'Affected by feelings - Emotionally stable', while the other is significant at .01 level which is concerned with the personality factor of 'Relaxed-Tense' On the basis of this it can be said that the null hypothesis No. 1(d) is only partly accepted and partly rejected.

Hypothesis No. 2 (a) States that :

"There is no significant relationship between values and academic achievement". Out of the six values, only two are significant .01 level which show that the hypotheses related to these ten values stand rejected at .01 level of significance. These two values are Religious and Social.

Other, two values, viz. Educational and Materialistic are significantly correlated at .05 level. Therefore, hypotheses related to these two values stand rejected at .05level.

In short, it can be said that hypothesis No. 2(a) is partly rejected and partly accepted.

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Hypothesis No. 2(b) States that :

"No significant relationship exists between values and academic achievement when intelligence is held constant."

When intelligence is controlled, out of six values, only four are significantly correlated. Religious, Educational and Social values are significant at .01 level which show that the hypotheses related to these values stand rejected at .01 level of significance. Materialistic value is significant at .05 level of significance, which shows that the hypothesis related to this value stands rejected at .05 level.

Hypothesis No. 2 (c) states that :

"Significant relationship does not exist between values and academic achievement when S.E.S. is held constant." When S.E.S. is controlled, out of six values, two are significant at .01 level and two are significant at .05 level of significance. Religious and Social values are significant at .01 level of confidence which show that the hypotheses related to these values stand rejected at .01 level. Other two values, viz. Educational and Materialistic are significant at .05 level which show that the hypotheses related to these two values stand rejected at .05 level.

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Hypothesis No. 2 (d) states that :

"There is no significant relationship between values and scholastic achievement when intelligence and S.E.S. are hold constant at a time".

Out of the six values, four values viz. Religious, Educational, Materialistic and Social are significantly related at .05 level of significance when S.E.S. and Intelligence, both are controlled. It shows that the hypotheses related to these values stand rejected at .05 level of confidence. Here, the level of significance of Religious and Social values have been reduced from .01 to .05 level when both S.E.S. and Intelligence are being controlled.

Hypothesis No. 3 states that :

"Each personality factors and values when combine together do not predict significantly to the scholastic achievement."

The findings in this case are that out of twenty two partial regression coefficients only five significantly contribute to academic achievement. The calculated values of 'F' of these five independent variables namely personality factor A, G, L, Q_1 and Q_2 all are significant at .01 level of significance. Besides this, multiple coefficient of correlation is also significant at .01 level. So the null hypothesis is partly accepted and partly rejected in case of female subjects.

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Hypothesis No. 4 states that :

"Personality characteristics of high and low achievers do not differ significantly."

The findings in this case are that the obtained critical ratios indicate that the high achievers and low achievers differ significantly only on nine personality factors out of sixteen personality factors at .01 level of confidence.

These nine personality factors are A, B, G,H, I, Q_1, Q_2, Q_3 and Q_4. Hence, the hypotheses related to these factors stand rejected.

On the whole, It can be said hypothesis NO. 4 is partly accepted and partly rejected.

Hypothesis No. 5 states that :

"The high and low achievers do not differ significantly in their values".

The findings in this case are that the obtained critical ratio indicate that the high achievers and low achievers also differ significantly only on three values, out of six values at .01 level. These three values are Religious, Educational and Social. Hence, the hypotheses related to these three values stand rejected at .01 level.

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Therefore, the hypothesis No. 5 is partly accepted and partly rejected at .01 level of confidence.

Conclusions :

The investigator is now in a position to draw conclusions on the basis of the findings mentioned above.

A. Relationship of Personality Characteristics and Scholastic Achievement :

Out of sixteen personality factors, only nine factors, viz. A, B, C, G, H, I, Q_2, Q_3 and Q_4 for female subjects are significantly related with scholastic achievement. Hence, the following nine conclusions can be made for :

A-1. 'Reserved-Outgoing' viz. factor 'A' of the personality is significantly related to scholastic achievement in positive direction. A person who gets high score on this factor is likely to get good scholastic achievement, while those who get low score would get low scholastic achievement.

A-2. "Less intelligent - More intelligent" factor 'B' of the personality is positively and significantly related with scholastic achievement, meaning thereby, that those female subjects who are highly intelligent are likely to get better scholastic achievement.

A-3. Personality factor 'C' viz. 'Affected by Feelings - Emotionally Stable' is positively and significantly

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correlated with scholastic achievement, it means that female students who get high scores on this factor are likely to get good marks. In other words, it can be said the subjects who are emotionally stable have the tendency to get good scholastic grades.

A-4. "Expedient-Conscientious" factor 'G' is positively correlated with scholastic performance. It means those who are conscientious i.e. possess high score are likely to show good scholastic achievement.

A-5. Personality factor 'H' viz. "Shy - Venturesome" is also significantly correlated, meaning thereby, those who are venturesome are likely to get good marks.

A-6. "Tough-minded vs. Tender-minded" is negatively correlated with scholastic achievement. It means that higher the scores on this factor, the subjects are to get poor school marks. In other words, those who are tender-minded are likely to get poor marks.

A-7 "Group-dependent Vs. Self-sufficient" factor 'Q_2' of the personality is also positively and significantly correlated with scholastic achievement, meaning thereby, those subjects who get high score on this factors are likely to get good school marks. Those who are self-sufficient are better in scholastic performance.

A-8. Factor 'Q$_3$' viz. "Undisciplined - Controlled" of personality is significantly correlated in positive direction. It means that the subject who are controlled possess the quality to get good scholastic achievement.

A-9. Personality factor of Relaxed - Tense' viz. factor 'Q$_4$' is also negatively and significantly related with scholastic achievement. It means that those who are relaxed in nature are likely to get good school marks. While anxiety-ridden pupils or those who are suffering mental tensions are likely to get poor school grades.

The remaining seven correlations are in significant and hence nothing definite can be said about their relationship with scholastic achievement.

B- Relationship of Personality Characteristics and Academic Achievement when Intelligence is Partialled Out :

B-1. When intelligence is held constant personality trait of 'Relaxed-Tense', is negatively correlated with academic achievement is significant at .01 level. It means that there who are having the relaxed trait of personality likely to get good academic achievement. While anxiety ridden pupils or those who are suffering from mental tensions are likely to get poor grades. The other fifteen correlations are insignificant and hence, nothing definite, can be said about their relationship with academic achievement.

C. Relationship of Personality Characteristics and Academic Achievement when S.E.S. is Held Constant :

C-1. 'Reserve-Outgoing' trait of personality is significantly related to academic achievement, when S.E.S. is held constant.

C-2. 'Less intelligent-More intelligent trait of personality is significantly related to academic achievement.

C-3. When S.E.S. is held constant, personality characteristic of Affected by feelings - Emotionally stable also contributes to academic achievement. It means that those who have the emotionally stability of personality are likely to get good academic achievement.

C-4. The personality trait of 'Tough minded-Tender minded' is significantly related in the negative direction with academic achievement. Those who score low on this personality trait are called tough minded and they are likely to get good grades.

C-5. 'Relaxed-tense' trait of personality is related to academic achievement in the negative direction.

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D- Relationship of Personality Characteristics and Academic Achievement when Intelligence and S.E.S. are Held Constants :

D-1. Personality characteristic of Affected by feeling - Emotionally stable is related to academic achievement in the negative direction. It would mean that those who are having the personality characteristics of affected by feelings are likely to get good academic achievement.

D-2. When S.E.S. and intelligence are held constants the, personality trait of "Relaxed-Tense" is related to academic achievement in the negative direction.

E. Relationship of Values and Academic Achievement:

E-1. "Religious, Educational, Materialistic, and Social values of female subjects are significantly related to the academic achievement. Religious and Social values are negatively correlated while Educational and Social values are correlated in positive direction. Hence, the female subjects who are less religious and materialistic are likely to get good marks whereas more social and educational subjects are likely to get good academic performance.

E-2. When intelligence is held constant four values out of six values are significantly correlated with academic achievement, Educational & Social values are related in positive direction whereas Religious and Materialistic values are related in negative direction. Hence, the results of E-1 are confirmed.

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E-3. When S.E.S. is held constant, the result is the same as it was in the case when intelligence was controlled. Only magnitude of correlation has been altered. Educational and Social values are related positively whereas the Religious and Materialistic values are related negatively. Hence, the inference is the same as it was in E-1 and E-2.

E-4. Values also influences academic attainment even if S.E.S. and Intelligence are held constants. It can be inferred that values are the powerful factors which contribute to academic achievement, irrespective of S.E.S. and intelligence. Since Educational and Social values contribute in positive direction whereas Religious and Materialistic values contribute in negative direction.

F- Prediction of Academic Achievement with the help of 16 Personality Factors along with 6 Values :

F-1. Out of twenty-two independent variables (16 P.F. and 6 values) of female subjects, only five predict significantly to the academic achievement. These significant variables are the personality traits of 'Reserved - Outgoing' , Expedient-Conscientious, Trusting-Suspicious, Conservative - Experimenting and "Group dependent - Self sufficient".

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G. Comparative Study of Personality Factors of High Achievers and Low Achievers.

G-1. High and Low Achievers of female subjects differ significantly in the following factors :

1.	Factor A.	Reserved Vs. Outgoing.
2.	Factor B.	Less Intelligent vs. More Intelligent.
3.	Factor G.	Expedient vs. Conscientious
4.	Factor H.	Shy vs. Venturesome.
5.	Factor I.	Tough-minded vs. Tender-minded
6.	Factor Q_1	Conservative vs. Experimenting
7.	Factor Q_2	Group dependent vs. Self-sufficient
8.	Factor Q_3	Undisciplined vs. Controlled
9.	Factor Q_4	Relaxed vs. Tense.

The following general conclusions for female students can be made :

(i) High achievers are out-going, more intelligent, conscientious, venturesome, experimenting, self sufficient and controlled where as low achievers are reserved, less intelligent, expedient, shy, conservative, group dependent and undisciplined.

(ii) High achievers are tough-minded and tension free whereas low achievers are tender-minded and anxiety-ridden.

H. Comparative Study of Values of High Achievers and Low Achievers :

H-1. High and Low achievers differ significantly in the following values :

1. Religions Values (R)

2. Educational Values (E_1)

3. Social Values (S)

The following general conclusions for female students can be made :

1. High achievers are more educational and social.

2. High achievers are less religious

Educational Implications of the Findings :

The educational implications of the present study are not difficult to discover. The subject of the study is of much importance and is of vital concern to educators. The study has, at least, reaffirmed the importance of the personality factors in academic achievement. Not only personality factors but values have also established its significance for academic achievement. It has been pointed out that nine out of the 16 personality factor and four out of 6 values significantly predict academic performance. The need for such study was voiced by the tremendous academic failures and under achievement faced by

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the present day Indian education. In this light the present study has certain implications of major importance. Enhancement of academic prediction, guidance for failures and under achievement are more important situations in which the findings can be utilized.

This study may be of immense use for the prediction of academic achievement. It follows logically that these personality characteristics can be included in the prediction battery of high school students in order to make suitable selection for awarding merit scholarships.

The results of the present investigation appear to be hopeful and positive. Several personality traits as measured by 16 P.F. Questionnaire have been revealed to be correlated with academic achievement. This shows that personality characteristics constitute important determinants of academic achievement. From the guidance point of view it is of much use. The knowledge of the contributing factors of personality may be useful to the teacher and guidance worker to understand academically failing students fully. The probable causes of the failures may be traced back to those personality characteristics found to be significantly correlated with academic achievement in the present study. Through counseling interviews they may be made aware of the personality characteristics which impel them to achieve more.

The findings of this study may be helpful to the administrator. The administrator may provide such situations in the school through which students may develop those personality characteristics which are useful in enhancing academic achievement.

Another important finding of this study is the significant contribution of values to academic achievement. The relationship that was normally obtained between these two variables is probably due to the fact that more highly values subjects work harder or more persistently and thus acquire or produce more. The real relationship is, therefore, apparently between the values and the amount and variety of performance. So, it would not be out of place to give some suggestions concerning the primary problem of arousing and maintenance of values motivation. Though satisfactory scientific research on this problem is still too sketchy to justify more than a casual treatment.

One of the aspects of values that is, academic aspiration can be aroused and be continued by avoiding initial discouragement. One of the problems involved in the initiation of academic performance and enhancement of academic aspiration is that of overcoming inertia. This is a difficult task, but it is enormously and unnecessarily worsened if the student is permitted to be overwhelmed by exposure, without modifying precaution, to the full scope of the task expected of him. Thus

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a student can more often be stimulated to work by a reasonable partial assignment than by the assignment of the whole task all at once.

Judicious use of external incentives can also be helpful in preventing initial discouragement. This is the most important problem, because using general social or classroom pressure to force a student to go through the motion of studying difficult material without sufficient relevant motivation is one of the surest ways to produce a permanent loss of interest and ability in a subject.

Suggestions for Further Researches :

Due to the immense importance placed on academic achievement and unending efforts to maximize the achievement level among pupils, the present study has thrown some light and insight into the relationships between personality and academic achievement and between values and academic achievement. Some broad suggestions on the lines on which further research studies can be conducted are given below-

1. The investigator feels that neither psychological nor sociological factors alone are capable of substantially enhancing our understanding of academic achievement. Thus the investigator proposes that it is at the level of the interaction between these two types of factors that any major break-through is likely to come, and for this reason

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the personality and social structure approach holds the best promise. An appropriate topic for research can be "To study the relationship and interaction between social reinforcement and personality characteristic and their impact on academic achievement".

2. Another interesting study can be conducted on the role of high school environment in determining the academic achievement of boys.

3. It may be worthwhile to study how the size of the school affects academic performances. In addition to this the relation between the achievement of the students and the characteristics of their school may be undertaken.

4. The present investigation was limited to female students only. Male students can also be the subject of study. Sex differences with regard to personality characteristics and academic motivation of values can be investigated.

5. Research may be undertaken to relate the different factors with values.

6. It may be interesting to study the relationship between personality traits, values and academic achievement of arts, science and commerce students. If stream wise analysis is made separately for each group of students, probably a different picture of predictors may emerge.

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Values predictors of academic achievement in science may be found to be different from those of arts or commerce.

7. A study may be undertaken to study the influence of teachers on values.

8. One of the important areas in which a thorough probing is required. The personality characteristics and values of boys studying in the public and private schools.

9. It could also be seen as to how values changes in the same group as they receive achievement motivation.

10. Researches may be planned by developing a fairly exhaustive list of traits, relevant to success in academic achievement and different groups may be compared.

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APPENDICES

TOOLS USED

(i)   Sixteen P.F. Questionnaire

(ii)   Personal Value Questionnaire

(iii) S.E.S. Scale Form A and Form B

(iv) Group Test of General Mental Ability.

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FORM C
(IPAT's 1969 Edition)

VSJ 1981 Hindi Edition

Prepared by : S. D. KAPOOR Ph. D. & V. K. D. TRIPATHI

आपको यहां करना है ... प्रश्न लेने है जिनसे यह पता चलेगा कि आपका मनोभाव कैसा है और आपकी ... इस प्रश्न के ... नहीं या गलत उत्तर नहीं हैं, क्योंकि हर आदमी को अपना-अपना दृष्टिकोण रखने का अधिकार है । इस जांच से अच्छी तरह सबमें अच्छा सुझाव पाने के लिये आपको चाहिये कि सभी प्रश्नों का उत्तर ठीक-ठीक और ... साथ दें । आपको अलग में एक "उत्तर-पत्र" दिया जाएगा, जिसमें अपना नाम और अन्य जानकारी की बातें ऊपर ... पर लिखा होगा ।

सबसे पहले आपको नीचे लिखे नमूने के चार प्रश्नों का उत्तर देना चाहिये जिससे आपको पता लग जाए कि जांच शुरू करने के पहले, आपको कुछ पूछना तो नहीं है । वैसे आपको सभी प्रश्नों को तो इस पुस्तिका से पढ़ना है, पर उनके उत्तर केवल "उत्तर-पत्र" में ही देना है (जिस नम्बर का प्रश्न पुस्तिका में हो उसी नम्बर के खाने में "उत्तर-पत्र" पर निशान लगाना है) । हर एक प्रश्न के तीन संभावित उत्तर दिये हुए हैं । नीचे लिखे उदाहरणों को पढ़िये और अपने उत्तरों को "उत्तर-पत्र" के ऊपरी भाग पर जहां "उदाहरण" छपा है, गुणा या क्रास (×) के निशान के जरिये किसी एक खाने (box) में भरते जाइये । अगर आप अपना उत्तर 'a' वाले ... के लिये चुनते है तो बाएं वाले खाने में (box के अन्दर) निशान लगाइये । अगर आपका उत्तर ... 'b' है तो बीच वाले खाने में निशान लगाइये । इसी तरह से अगर आपका उत्तर "c" वाला है तो दाहिने वाले खाने के अन्दर निशान लगा दीजिये ।

उदाहरण

1. मैं टीम वाले खेलों का देखना पसन्द करता हूं ।

   a. हां,   b. कभी-कभी   c. नहीं ।

2. मैं ऐसे लोगों को पसन्द करता हूं जो :

   a. गंभीर हो,

   b. दोनों के बीच के हों,

   c. जल्दी दोस्त बना लेते हों ।

3. रुपया आनन्द (खुशी) नहीं ला सकता ।

   a. हां (सच),   b. दोनों के बीच का,   c. नहीं (गलत) ।

4. औरत का बच्चे से वही सम्बन्ध है जो भेड़ का :

   a. मेमना,   b. कुत्ता,   c. सड़के से है ।

आखिरी उदाहरण में एक उत्तर सही है —मेमना । लेकिन, इस तरह के तर्क वाले प्रश्न इस पुस्तिका में बहुत कम है ।

अब अगर कोई बात आपकी समझ में नहीं आई हो तो अभी पूछ लीजिये । क्योंकि, परीक्षक अब थोड़ी ही देर में आपको पन्ना ... को लिखने और निशान लगाना शुरू करने के लिए कहेंगे ।

प्रश्नों का उत्तर देते समय नीचे लिखी इन चार बातों को अपने मन में रखें :

1. आपको किसी प्रश्न पर ज्यादा सोच-विचार करने की जरूरत नहीं है । जो सबसे पहला उत्तर मन में आये उसमें ही निशान लगा दें । यह सच है कि प्रश्न बहुत छोटे हैं और आपको उनसे सारी जानकारी नहीं मिल सकती जिन्हें आप कभी-कभी जानना चाहेंगे । उदाहरण के लिए, ऊपर के पहले प्रश्न में "टीम वाले खेलों" के बारे में पूछा गया है जबकि ऐसा भी हो सकता है कि आप फुटबाल को बास्केटबाल से ज्यादा पसन्द करते हों । लेकिन आपको "औसत या आमतौर के खेल के लिये" उत्तर देना है या उसी तरह की मिलती-जुलती एक आम या औसत अवस्था का ख्याल करके उत्तर देना है । जहां तक हो सके, आप अपना सबसे ठीक उत्तर दें । उत्तर देने की रफ्तार एक मिनट में पांच या छ प्रश्नों से कम नहीं होनी चाहिये । ज्यादा से ज्यादा चालिस मिनट में सभी प्रश्नों का उत्तर आपको देना चाहिये ।

2. बीच वाले "अनिश्चित" उत्तरों का सहारा लेने की कोशिश मत करिये । इन पर तभी निशान लगायें जब किनारे वाले उत्तरों को देना आपके लिये सचमुच ही असंभव हो—शायद ऐसा चार या पांच प्रश्नों में एक बार हो ।

3. इस बात का पक्का ख्याल रखें कि कोई प्रश्न छूटने न पाये, और जैसे भी हो सभी प्रश्नों का उत्तर दें । ऐसा लग सकता है कि कुछ प्रश्न आप पर अच्छी तरह लागू न होते हों, पर आप अपने को उस परिस्थिति में डाल कर अपना उत्तर दें । आपको कुछ प्रश्न अपने निजी मामलों से भी सम्बन्धित लगेंगे, पर याद रखिये कि आपके उत्तर-पत्रों को बिल्कुल गुप्त रखा जाता है और उनको खास तौर से बनाई हुई कुंजियों की मदद के बगैर नहीं जाना जा सकता । साथ ही एक-एक प्रश्न के उत्तर की जांच अलग-अलग नहीं की जाती है । इसलिए आप बेझिझक अपने मन का उत्तर दें ।

4. जो उत्तर आपके लिए सही है वही उत्तर सच्चाई और ईमानदारी से दें । परीक्षक पर अच्छा प्रभाव डालने के लिए "यह कहना ठीक होगा" ऐसा सोचकर निशान न लगायें ।

जब तक कहा न जाय कृपया पन्ना मत उलटिये

1. मैं सोचता हूँ कि मेरी यादाश्त पहले कभी भी उतनी अच्छी नहीं थी जितनी अब है ।

   a. हाँ,   b. दोनों के बीच का,   c. नहीं

2. मैं लोगों में बहुत दूर, अकेले में, एक साधु की तरह प्रसन्न रह सकता हूँ ।

   a. हाँ   b. यदाकदा   c. नहीं ।

3. अगर मुझे आसमान को 'नीचा' तथा सर्दी को 'गर्म' कहना पड़े तो मैं एक अपराधी को :

   a. डाकू.   b. साधू,   c. बादल कहना चाहूँगा ।

4. बिस्तर पर जाते ही मुझे :

   a. जल्दी ही नींद आ जाती है.
   b. दोनों के बीच का.
   c. नींद आने में परेशानी होती है ।

5. ट्रैफिक की लाइन में कार अथवा मोटर साइकिल या साइकिल चलाते समय मुझे सन्तोष तब होता है, जब :

   a. कतार में मैं दूसरी गाड़ियों से पीछे रहता हूँ,
   b. दोनों के बीच का,
   c. कतार में सबसे आगे में पहुँच जाता हूँ ।

6. किसी भी पार्टी में मैं दूसरों को मज़ाक करने तथा कहानियाँ कहने दिया करता हूँ ।

   a. हाँ.   b. कभी-कभी.   c. नहीं ।

7. मेरे लिए यह जरूरी है कि मैं गंदे वातावरण में न रहूँ ।

   a. सही,   b. अनिश्चित,   c. गलत ।

8. किसी भी पार्टी में सबसे अधिक लोग मुझसे मिलकर निःसंदेह प्रसन्न होते हैं ।

   a. हाँ,   b. कभी-कभी,   c. नहीं ।

9. व्यायाम (कसरत) करने के लिए मैं अधिकतर यह पसन्द करूँगा :

   a. तैरना और नाचना,
   b. दोनों के बीच का,
   c. कुश्ती और बास्केट बाल,

10. जब मैं लोगों के कुछ कर लेने का दावा करने में और वास्तव के काम करने में बहुत बड़ा फर्क देखता हूँ तो मुझे इस बात पर मन ही मन में हँसी आती है ।

   a. हाँ,   b. कभी-कभी,   c. नहीं ।

11. किसी भी दुर्घटना के बारे में पढ़ते ही मैं सही सही पता लगाना पसन्द करता हूँ कि यह लगाना पसन्द कैसे हुआ ।

   a. हमेशा,   b. कभी कभी,   c. शायद ही कभी ।

12. जब मेरे दोस्त लोग मेरा मज़ाक बनाते हैं तो मैं अक्सर बिना कुछ महसूस किए उसका उतना ही आनन्द लेता हूँ जितना दूसरे ।

   a. सही,   b. दोनों के बीच का,   c. गलत ।

13. जब कोई मुझसे गुस्से से बात करता है तो मैं उस बात को जल्दी ही भूल सकता हूँ ।

   a. सही,   b. अनिश्चित,   c. गलत ।

14. पहले से अपनाए गए रास्ते पर चलने के बजाय मैं हर काम करने का नया रास्ता निकालना पसन्द करता हूँ ।

   a. सही,   b. अनिश्चित,   c. गलत,

15. जब मैं कोई योजना बनाता हूँ, तो उसे बिना किसी बाहरी सहायता के, बिल्कुल अकेला पूरा करना पसन्द करता हूँ ।

   a. हाँ,   b. कभी-कभी,   c. नहीं ।

16. जितना अन्य लोग ज्यादातर दूसरों के आसरे रहते हैं, उनकी तुलना में मैं अपने आपको कम निर्भर रहने वाला व्यक्ति समझता हूँ ।

   a. सही,   b. दोनों के बीच का,   c. गलत ।

17. मैं ऐसे लोगों से मिलकर जल्दी ही परेशान हो जाता हूँ जो फैसला जल्दी नहीं कर पाते ।

   a. सही,   b. दोनों के बीच का,   c. गलत ।
   (उत्तर–पत्र के कालम 1 का अन्त)

18. मुझमें कभी कभी, भले ही थोड़ा सा, अपने माता-पिता के लिए नफरत पैदा होती है ।

   a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

19. मैं अपने अन्दर की बातों को बताना ज्यादा पसन्द करूँगा :

   a. अपने अच्छे दोस्तों से,
   b. अनिश्चित,
   c. डायरी में ।

20. मेरे विचार से "अशुद्ध" शब्द के उल्टे का उल्टा शब्द :

   a. अनियमित,   b. ठीक,   c. घटिया है ।

21. मैं अपने अन्दर हमेशा एक बड़ी ताकत का अनुभव करता हूँ जब मुझे आवश्यकता होती है ।

   a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

—3—

22. मैं उस आदमी से अधिक चिढ़ता हूँ, जो :

   a. भद्दे मजाक करता है और लोगों को परेशानी में डाल देता है,

   b. अनिश्चित

   c. मिलने का समय निश्चित करके देर से आता है और मेरे लिए असुविधा उत्पन्न करता है ।

23. मैं लोगों को आमंत्रित करके और उनका मनोरंजन कर प्रसन्न होता हूँ ।

   a. सही, b. अनिश्चित, c. गलत ।

24. मैं महसूस करता हूँ कि :

   a. कुछ नौकरियाँ सावधानी पूर्वक नहीं भी की जा सकता है जैसा कि दूसरी की जाती हैं,

   b. दोनों के बीच का,

   c. कोई भी नौकरी की जाय उसे गम्भीरता पूर्वक करना चाहिए

25. मुझे अधिक संकोची एवं शर्मीला होने के कारण हमेशा लड़ना पड़ा है ।

   a. हाँ, b. दोनों के बीच का, c. नहीं ।

26. मेरे लिए यह होना अधिक दिलचस्प होगा :

   a. एक धार्मिक पुरोहित,

   b. अनिश्चित

   c. फौज का कर्नल ।

27. अगर कोई पड़ोसा मुझे छोटी छोटी बातों में धोखा देता है तो मैं उससे नाराज होने के बदले उसे खुश रखना ज्यादा पसंद करूँगा ।

   a. हाँ, b. कभी कभी, c. नहीं ।

28. मैं वह दोस्त पसन्द करता हूँ, जो :

   a. अपनी रुचियों में योग्य एवं व्यावहारिक हो,
   b. दोनों के बीच का,
   c. जीवन के बारे में अपने विचारों को गम्भीरता से सोचता हो ।

29. जिन बातों में मैं अच्छी तरह जानता और विश्वास करता हूँ उनके बारे में मुझे दूसरों के विपरीत विचार सुनकर परेशानी होती है ।

   a. सही, b. दोनों के बीच का, c. गलत ।

30. मैं अपने पिछले कार्यों और गलतियों के बारे में चिन्ता करता रहता हूँ और जरूरत से ज्यादा सजग रहता हूँ ।

   a. हाँ, b. दोनों के बीच का, c. नहीं ।

31. यदि मैं दोनों ही खेल खेलने में ज्यादा अच्छा होता तो मैं यह खेल ज्यादा पसन्द करता :

   a. शतरंज खेलना, b. दोनों के बीच का, c. बॉलिंग करना ।

32. मैं उन लोगों के बीच रहना पसन्द करता हूँ जो समूह में आनन्द लेते है और उत्साह दिखाते हैं ।

   a. हाँ, b. दोनों के बीच का, c. नहीं ।

33. मैं इसमें ज्यादा विश्वास रखता हूँ :

   a. बीमे में, b. दोनों के बीच का, c. अच्छे भाग्य में ।

34. मुझे जब भी जरूरत होती है, मैं अपनी परेशानियों और जिम्मेदारियों को भूल सकता हूँ ।

   a. हाँ, b. कभी-कभी, c. नहीं ।

   (उत्तर-पत्र के कालम 2 का अन्त)

35. जब मैं गलत होता हूँ तो मेरे लिए यह मानना मुश्किल होता है ।

   a. हाँ, b. कभी-कभी, c. नहीं ।

36. किसी कारखाने में यह काम संभालना ज्यादा दिलचस्प होगा :

   a. मशीनरी का काम या लेखा-जोखा रखना,

   b. दोनों के बीच का,

   c. नए लोगों को रखना और उनसे बातें करना ।

37. नीचे निम्न शब्दों में से कौन सा एक शब्द दूसरे दो शब्दों से मेल नहीं खाता :

   a. बिल्ली, b. नजदीक, c. सूर्य ।

38. छोटी-छोटी बाधाएं (दिक्कतें) भी मुझे :
   a. परेशान करती हैं,
   b. दोनों के बीच का,
   c. बिल्कुल परेशान नहीं करती ।

39. उचित और ठीक समय पर अपने निजी नौकरों (Personal Servants) द्वारा इन्तजार किए जाने पर मुझे काफी प्रसन्नता होती है ।

   a. अक्सर, b. कभी-कभी, c. कभी नहीं ।

40. मैं ऐसे शहर में रहना ज्यादा पसन्द करूँगा, जो :

   a. खूबसूरत और कलात्मक ढंग से बना हो,

   b. दोनों के बीच का,

   c. देखने में भले ही भद्दा हो मगर उन्नतिशील और विकासवान हो ।

41. लोगों को नैतिक नियमों (कानूनों, Moral Laws) का पालन करने पर और अधिक जोर देना चाहिए जितना कि वे देते हैं ।

   a. हाँ, b. कभी-कभी, c. नहीं ।

42. मुझे ऐसा बताया गया है कि बचपन में मैं ज्यादातर :

   a. शान्त और चुपचुप रहता था,

   b. दोनों के बीच का,

   c. जिन्दादिल और हमेशा कुर्तीला रहता था ।

43. एक अच्छे यंत्र या मशीन के इस्तेमाल से मुझे रोजमर्रा का निर्माण कार्य करने में भी आनन्द आता है ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

44. मैं सोचता हूँ कि अधिकतर गवाह सच बोलते हैं भले ही वह उनके लिए बाद में परेशानी पैदा करता हो ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

45. जब मैं किसी नए आदमी से मिलता हूँ तो मैं यह ज्यादा पसन्द करूँगा :

    a. उससे उसके राजनीतिक एवं सामाजिक विचारों पर बात छोड़ करना,

    b. दोनों के बीच का,

    c. उससे कुछ अच्छे और नए चुटकुले सुनाने के लिए कहना ।

46. मैं किसी मजाक या चुटकुले पर अपनी हँसी को दूसरों की तुलना में अधिक सीमित रखने की कोशिश करता हूँ ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

47. मैं अपने को कभी इतना दुःखी महसूस नहीं करता कि चिल्ला पड़ू ।

    a. सही,   b. अनिश्चित,   c. गलत ।

48. संगीत में मैं आनन्द लेता हूँ :

    a. सेना के बैंड परेड में,

    b. अनिश्चित

    c. वायलिन की धुनों में ।

49. मैं गरमी में दो हफ्ते बिताना ज्यादा पसन्द करूँगा :

    a. पक्षियों (चिड़ियों) को देखते हुए अपने एक या दो दोस्त के साथ देश में घूमकर,

    b. अनिश्चित,

    c. किसी खेल में एक समूह का नेता होकर ।

50. आगे के लिए योजना बनाने का प्रयास :

    a. कभी बेकार नहीं जाता,

    b. दोनों के बीच का,

    c. नहीं करना चाहिए ।

51. अपने पड़ोसियों द्वारा किए गए नासमझी के कार्यों या उनके द्वारा किए गए व्यंगों से मुझे कोई दुःख या अप्रसन्नता नहीं होती ।

    a. सही,   b. अनिश्चित,   c. गलत ।

(उत्तर-पत्र के कालम 3 का अन्त)

52. मैं उस समय अपने काम को आसान पाता हूँ जब मैं यह जानता हूँ कि मैं सही काम कर रहा हूँ ।

    a. हमेशा,   b. कभी-कभी,   c. शायद ही कभी ।

53. मैं यह होना ज्यादा पसन्द करूँगा :

    a. एक व्यापारिक दफ्तर में प्रबन्ध और लोगों को देखने का कार्य करना,

    b. दोनों के बीच का,

    c. एक शिल्पकार के रूप में शान्त कमरे में अकेले योजना बनाना ।

54. "घर" का "कमरे" से वही सम्बन्ध है जो "पौधे" का :

    a. जंगल,   b. पेड़,   c. पत्ती से है ।

55. परिस्थितियाँ मेरा साथ नहीं देती हैं ।

    a. शायद ही कभी,

    b. कभी-कभी,

    c. बार-बार ।

56. जीवन के बहुत से कामों में मैं विश्वास करता हूँ :

    a. दाँव लगाने में,

    b. दोनों के बीच का,

    c. अपने को बचाए (सुरक्षित) रखने में ।

57. कुछ लोग यह सोच सकते हैं कि मैं बहुत बात करता हूँ ।

    a. हो सकता है,   b. अनिश्चित,   c. असंभव ।

58. मैं उस आदमी की ज्यादा तारीफ करूँगा, जो :

    a. एक चालाक व्यक्ति हो मगर भरोसे लायक न हो;

    b. दोनों के बीच का;

    c. औसत प्रकार का व्यक्ति हो मगर किसी भी तरह के लालच या प्रलोभनों (Temptations) को रोकने के लिए दृढ़ हो ।

59. मैं किसी भी नतीजे पर :

    a. बहुत से लोगों की अपेक्षा जल्दी पहुँचता हूँ,

    b. अनिश्चित,

    c. अधिकतर लोगों से बाद में पहुँचता हूँ,

60. मैं ऐसे व्यवहारों से ज्यादा प्रभावित हो जाता हूँ, जिनमें :

    a. कुशलता और शोभा झलकती हो,

    b. दोनों के बीच का,

    c. शक्ति और अधिकार की भावना हो ।

61. मैं दूसरों का साथ देने वाला आदमी समझा जाता हूँ ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

62. मैं मुंहफट और गिरे हुए व्यक्तियों की अपेक्षा ऊँचे और कुशल व्यक्तियों से बात करने में ज्यादा आनन्द लेता हूँ ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

63. मैं अच्छा समझता हूँ :

    a. अपनी परेशानियों को अपने तक रखना,

    b. दोनों के बीच का,

    c. उनके बारे में अपने दोस्तों से बात करना ।

5

64. यदि कोई व्यक्ति मेरे सुझाव देने पर कोई जवाब नहीं देता तो मैं समझता हूँ कि मैंने कोई बेवकूफी की बात कह दी है ।

    a. सही,   b. दोनों के बीच का,   c. गलत ।

65. मैंने अपने स्कूल के जीवन में इस तरह से अधिक सीखा है ।

    a. दर्जे में जाकर,   b. दोनों के बीच का,   c. किताबें पढ़कर ।

66. मैं अपने को सामाजिक जिम्मेदारियों और संगठनों में शामिल करने से बचाता हूँ ।

    a. सही,   b. कभी-कभी,   c. गलत,

67. जब मेरे लिए कोई समस्या मुश्किल हो जाती है और उसमें मुझे अधिक काम करना पड़ता है तो मैं यह कोशिश करता हूँ कि :

    a. दूसरी समस्या से ली जाय,

    b. दोनों के बीच का,

    c. उसी समस्या को फिर से दूसरी तरह से हल किया जाय ।

68. बिना किसी स्पष्ट एवं वास्तविक कारण के मेरी मानसिक स्थिति भावुक हो जाती है और मैं हँसने, चिन्ता करने, तथा गुस्सा होने लगता हूँ ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

(उत्तर पत्र के कालम 4 का अन्त)

69. मेरा दिमाग (Mind) किसी किसी समय उतना अच्छा काम नहीं करता जितना कि वह और दूसरे समय करता है ।

    a. सही,   b. दोनों के बीच का,   c. गलत ।

70. मैं लोगों को उनकी इच्छानुसार मिलने का समय देकर उन्हें कृतज्ञ (आभारी) कर प्रसन्न होता हूँ, भले ही वह मेरे लिए असुविधाजनक हो ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

71. 1, 2, 3, 6, 5 के क्रम को चालू रखने के लिए उचित संख्या :

    a. 10,   b. 5,   c. 7 है ।

72. कभी कभी मैं बिना किसी खास कारण के, हल्का सर दर्द, चक्कर आना या बेहोश होने सा अनुभव करने लगता हूँ ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

73. एक रेस्टरां (होटल) में जाकर किसी बेयरा को बिना वजह अधिक परेशान करने के बजाय मैं इन्तजार कर लेना ज्यादा पसन्द करूँगा ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

74. मैं ज्यादातर लोगों की अपेक्षा "अभी और यहीं" के सिद्धान्त को अपने जीवन में ज्यादा महत्व देता हूँ ।

    a. सही,   b. अनिश्चित,   c. गलत ।

75. मैं किसी भी पार्टी में पसन्द करता हूँ :

    a. उपयोगी वाद-विवाद में शामिल होना,

    b. दोनों के बीच का,

    c. लोगों को आराम करते हुए देखना और उन्हें आराम करने देना ।

76. चाहे मेरे चारों तरफ कितने ही लोग क्यों न हों, मैं अपने मन की बात बेहिचक कह देता हूँ ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

77. यदि मेरे लिए बीते हुए समय में जाना संभव हो सके तो मैं इनसे मिलना ज्यादा पसन्द करूँगा :

    a. नेता जी सुभाष चन्द्र बोस,

    b. अनिश्चित,

    c. गुरुदेव रवीन्द्र नाथ टैगोर ।

78. मुझे इस बात से अपने को रोकना है जो कि मैं दूसरे की समस्याओं में अधिक पड़कर सुलझाने की कोशिश करता हूँ ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

79. अगर किसी संग्रहालय या बड़ी दूकान में मुझे काम करना पड़े, तो मैं इसे ज्यादा पसन्द करूँगा :

    a. सजावट आदि की रूप रेखा बनाना,

    b. दोनों के बीच का,

    c. एक खजांची (cashier) बनना ।

80. यदि लोग मेरे बारे में अच्छा नहीं सोचते या बुरा भला कहते हैं तो भी मैं अपने दिमाग को शान्त रख सकता हूँ ।

    a. हाँ,   b. दोनों के बीच का,   c. नहीं ।

81. यदि मेरा कोई पुराना दोस्त मुझसे बेरुखी दिखाता है तो मैं प्रायः यह :

    a. सोचता हूँ कि उसका मूड ठीक नहीं है,

    b. अनिश्चित,

    c. सोचता हूँ कि मुझसे क्या गलती हो सकती है ।

82. ज्यादा परेशानी उन लोगों से पैदा होती है, जो :

    a. पहले से ही संतोषजनक तरीकों (ढंगों) में भी परिवर्तन एवं सुधार करते हैं,

    b. अनिश्चित,

    c. नए एवं अधिक उपयोगी तरीकों में भी दिलचस्पी नहीं दिखाते ।

83. मैं लोगों से आस पास की (स्थानीय) समस्याओं पर बात करना बहुत पसन्द करता हूँ ।

    a. हाँ,   b. कभी-कभी,   c. नहीं ।

84. तकल्लुफ करने वाले एवं नियमबद्ध लोगों से मेरी नहीं निभ पाती ।

    a. सही,   b. कभी-कभी,   c. गलत ।

85. मेरा अन्दाज है कि मैं दूसरों की तुलना में कम चिड़चिड़ा हूं ।
   a. सही   b. अनिश्चित   c. गलत ।

86. .... कम
   .... ।
   a. ....   b. कभी-कभी   c. गलत ।

87. मैं किसी संगठन का नायक बनने का भार या जिम्मेदारी जल्दी ही दूसरे पर डाल देना पसन्द करूंगा जिसका कि मैं मदद हूं ।
   a. सही,   b. दोनों के बीच का,   c. गलत ।

88. मान लो, अगर एक घड़ी की दोनों सुइयां हर बार ठीक 65 मिनट बाद आपस में मिल जाया करती हैं (किसी एक सही घड़ी द्वारा जांचे) तो क्या वह घड़ी
   a. धीमी चल रही है,
   b. समय ठीक बता रही है,
   c. तेज चल रही है ।

89. .... महत्वपूर्ण .... है ।
   a. अक्सर,   b. कभी-कभी,   c. बहुत कम ।

90. लोग .... कहा करते हैं कि मैं हर काम को अपने तरीके से किया जाना पसन्द करता हूं ।
   a. सही,   b. कभी-कभी,   c. गलत ।

91. मैं अपने को बहुत अधिक जोश में आने से बचाकर रखना बुद्धिमानी समझता हूं वरना मैं थक जाता हूं ।
   a. हां   b. कभी-कभी,   c. नहीं ।

92. घर पर रहने से भी खाली समय में
   a. मार मालिक हूं और आराम करता हूं,
   b. दोनों के बीच का,
   c. कोई खास काम करता हूं ।

93. नई बातचीत का रास्ता बनाने में मैं सजग रहता हूं और शर्म महसूस करता हूं ।
   a. हां   b. कभी-कभी   c. नहीं ।

94. मैं सोचता हूं जो बातें लोग कविता में लिखते हैं उसे बिल्कुल वैसा ही साधारण गद्य के रूप में भी लिखा जा सकता है ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

95. मुझे ऐसा शक होता है कि जो लोग मुझसे दोस्ताना व्यवहार करते हैं वे मेरी पीठ पीछे धोखेबाज भी हो सकते हैं ।
   a. हां, आमतौर से,
   b. कभी-कभी,
   c. नहीं, शायद ही कभी ।

96. मैं सोचता हूं कि मेरे साल भर में हुए अजीबोगरीब तजुर्बों (अनुभवों) से भी मेरा व्यक्तित्व लगभग वैसा ही रहता है जैसा यह पहले था ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

97. मेरे लिए यह होना ज्यादा दिलचस्प होगा :
   a. जीव वैज्ञानिक के रूप में पौधों का अध्ययन करने वाला, व्यक्ति,
   b. अनिश्चित,
   c. खजांची होना या बीमे का एजेन्ट होना ।

98. कुछ चीजों के प्रति जैसे कुछ खास तरह के जानवर, पौधों आदि से मुझे अकारण अरुचि होती है और डर लगता है ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

99. मैं उन तरीकों के बारे में सोचना पसन्द करता हूं जिनसे कि हमारी दुनिया तरक्की करके बदल सकती है ।
   a. हां,   b. दोनों के बीच का,   c. नहीं ।

100. मैं ऐसा खेल पसन्द करता हूं, जहां :
   a. टीम में रहना हो या एक पार्टनर मिले,
   b. अनिश्चित,
   c. प्रत्येक व्यक्ति अपना अलग-अलग हो ।

101. रात में मैं प्रायः अजीब तरह के और हंसाने वाले सपने देखता हूं ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

102. यदि मैं किसी एकान्त घर में अकेला छोड़ दिया जाऊं तो कुछ समय बाद मैं थोड़ी सी बेचैनी और डर सा महसूस करता हूं ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

(उत्तर पत्र के कालम 6 का अन्त)

103. जिन लोगों को मैं वास्तव में नापसन्द करता हूं उन्हें उनका दोस्त बनकर भी धोखा दे सकता हूं ।
   a. हां,   b. कभी-कभी,   c. नहीं ।

104. नीचे लिखे शब्दों में से कौन सा एक शब्द दूसरे दो शब्दों से मेल नहीं खाता :
   a. सोचना,   b. देखना,   c. सुनना ।

105. यदि राम की मां श्याम के पिता की बहन है तो श्याम का राम के पिता से क्या सम्बन्ध होगा ।
   a. चचेरा भाई,   b. भतीजा,   c. चाचा ।

(परीक्षा का अन्त)

M

7

क्रम संख्या   P   R   E   M   S   H   क्रम संख्या   P   R   E   M

1. क .... [   ]   13. क .... [
   ख .... [   ]   ख . [   ]
2. क .... [   ]   14. क .... [   ]
   ख .. [   ]   ख .... [   ]
3. क .... [   ]   15. क ....[
   ख... .... [   ]   ख ....
4. क .... [   ]   16. क .... [   ]
   ख .... [   ]   ख .... [   ]
5. क .. [   ]   17. क [   ]
   ख..................... [   ]   ख ....
6. क .... [   ]   18. क ....
   ख .... [   ]   ख .... [   ]
7. क .... [   ]   19. क .... [   ]
   ख............... .. [   ]   ख ....
8. क .... [   ]   20. क . ...
   ख .... [   ]   ख [   ]
9. क .. [   ]   21. क........................ [   ]
   ख .... [   ]   ख .... [   ]
10. क.................... [   ]   22 क .... [   ]
    ख .... [   ]   ख .... [   ]
11. क .. [   ]   23. क ....[
    ख.................... [   ]   ख................................
12. क.......... [   ]   24. क.......... [   ]
    ख .... [   ]   ख ..[   ]

योग _____ _____   योग _____ _____
    _____

R   E   M   S   H

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मेरे जीवन के व्यक्तिगत मूल्य

उत्तर-पत्र

नाम ....

आयु ....लगभग

महाविद्यालय का नाम ....

शैक्षिक योग्यता ....

वेतनमान :-प्रोफेसर/रीडर/प्रवक्ता ....

प्राप्तांक :—

पृष्ठ	P	R	E	M	S	H
3						
4						
5						
6						
7						
योग						

SESS

FORM A (URBAN)

डॉ० एस० पी० कुलश्रेष्ठ

T.M. No. 458715

कृपया इन्हें भरिये :—

नाम ....

आयु .... जन्म-तिथि ....

कक्षा व वर्ग .... रोल नं० .... तारीख ....

विद्यालय ....

घर का पूरा पता ....

निर्देश

इस सूची का उद्देश्य तुम्हारे परिवार के सामाजिक-आर्थिक स्तर का निर्धारण करना है । अतः तुम अपने माता/पिता, भाई/बहन के बारे में सही-सही सूचनायें भरो । विश्वास रखो, तुम्हारे द्वारा दी गयीं सूचनायें गुप्त रखी जावेंगी और किसी को भी नहीं बतायी जावेंगी । इस परिसूची में प्रत्येक प्रश्न के कई सम्भावित उत्तर दिये गये हैं—तुम इनमें से अपने परिवार के ऊपर लागू होने वाले उत्तरों को चुनो और उनके सामने बने कोष्ठों (□) में सही (√) का निशान लगा दो ।

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Estd. : 1971

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4/230, Kacheri Ghat, AGRA - 282 004 (U. P.) India.

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१. तुम्हारे पिता/संरक्षक/माँ/भाई/बहन किस प्रकार के व्यवसाय में कार्य करते है ?   संरक्षक पिता   माता   सबसे बड़ा भाई

(क) ऐसे व्यवसाय जिनमें उच्च शिक्षा की उपाधि की आवश्यकता पड़ती है । जैसे—वकील, ऐडवोकेट, प्रोफेसर, डॉक्टर व इन्जीनियर आदि ।

(ख) उच्च स्तरीय प्रशासनात्मक कार्यकर्त्ता या किसी बड़े व्यावसायिक संस्थान के मालिक/प्रबन्धक आदि ।

(ग) ऐसे व्यवसाय जिनमें कम से कम स्नातक शिक्षा की आवश्यकता पड़ती है । जैसे—हाईस्कूल या इंटर कालेज के शिक्षक, मैडीकल रिप्रेजेण्टेटिव आदि ।

(घ) मध्यम वर्गीय व्यावसायिक कार्यों के मालिक / प्रबन्धक या पार्टनर तथा सेना के कमीशण्ड ऑफीसर ।

(य) सामान्य व्यावसायिक या तकनीकी कार्य जैसे प्रायमरी या नर्सरी स्कूल के शिक्षक, दुकानदार या सचिव आदि ।

(र) कौशलयुक्त व्यवसाय जैसे—क्राफटमैन, लुहार, बढ़ई तथा बिजली वाला आदि ।

(ल) सेवा व्यवसाय (service worker) जैसे—क्लर्क, टाइपिस्ट, स्टेनो, पुलिस-मैन, फायरमैन तथा सेना के नॉन-कमीशण्ड अफसर आदि ।

(व) मध्यम श्रेणी के कौशलयुक्त व्यवसाय (semi-skilled jobs) जैसे—मशीन-ऑपरेटर आदि ।

(स) बहुत मामूली कार्य (unskilled jobs) जैसे—सेवक, चपरासी, मजदूर, कृषक आदि ।

२. तुम्हारे परिवार के सदस्यों की सबसे अधिक शिक्षा कहाँ तक हुई है ?

(क) कालेज शिक्षा के बाद कोई उच्च स्तरीय उपाधि जैसे—Ph. D. अथवा D. Litt. आदि ।

(ख) स्नातकोत्तरीय शिक्षा जैसे—M.A., M.Sc., M.Com., M.Sc. (Ag.) आदि ।

(ग) स्नातकीय शिक्षा जैसे—B.A., B.Sc., B.Com., B.Sc. (Ag.) आदि ।

(घ) हायर सैकेण्डरी / इण्टरमीडिएट

(य) हाई स्कूल

(र) मिडिल स्कूल

(ल) प्राइमरी स्कूल

(व) अशिक्षित

३. तुम्हारे परिवार के विभिन्न सदस्यों के पास कौनसी सबसे ऊँची व्यावसायिक उपाधियाँ हैं ?

(क) स्नातकोत्तरीय शिक्षा के बाद की व्यावसायिक उपाधि जैसे—D.E.V.G., या D. M., S. P., D. P. R. आदि ।

(ख) स्नातक शिक्षा के बाद की व्यावसायिक उपाधि या डिप्लोमा जैसे—B. Ed. आदि ।

(ग) हायर सैकेण्डरी / इण्टर के बाद का व्यावसायिक डिप्लोमा जैसे—शिक्षण का डिप्लोमा, इन्जीनियरिंग का डिप्लोमा आदि ।

(घ) हाई स्कूल शिक्षा के बाद की प्रशिक्षण उपाधि ।

(य) मिडिल स्कूल के बाद की प्रशिक्षण उपाधि ।

(र) सामान्य प्रशिक्षण उपाधि ।

(व) कोई भी प्रशिक्षण व्यावसायिक उपाधि नहीं है ।

४. आपके परिवार की कुल मासिक आय कितनी है ?

(क) २००० रुपये से अधिक

(ख) १५०१ से २००० रुपये तक

(ग) १००१ से १५०० रुपये तक

(घ) ५०१ से १००० रुपये तक

(य) २०१ से ५०० रुपये तक

(र) १०१ से २०० रुपये तक

(ल) ५० से १०० रुपये तक

R

१. तुम्हारे पिता/संरक्षक/माँ/भाई/बहन किस प्रकार के व्यवसाय में कार्य करते है ?

	संरक्षक पिता	माता	सबसे बड़ा भाई	सबसे बड़ी बहन
(क) ऐसे व्यवसाय जिनमें उच्च शिक्षा की उपाधि की आवश्यकता पड़ती है । जैसे–वकील, ऐडवोकेट, प्रोफेसर, डॉक्टर व इन्जीनियर आदि ।	☐	☐	☐	☐
(ख) उच्च स्तरीय प्रशासनात्मक कार्यकर्ता या किसी बड़े व्यावसायिक संस्थान के मालिक/प्रबन्धक आदि ।	☐	☐	☐	☐
(ग) ऐसे व्यवसाय जिनमें कम से कम स्नातक शिक्षा की आवश्यकता पड़ती है । जैसे–हाईस्कूल या इंटर कालेज के शिक्षक, मैडीकल रिप्रेजेण्टेटिव आदि ।	☐	☐	☐	☐
(घ) मध्यम वर्गीय व्यावसायिक कार्यों के मालिक / प्रबन्धक या पार्टनर तथा सेना के कमीशण्ड ऑफीसर ।	☐	☐	☐	☐
(य) सामान्य व्यावसायिक या तकनीकी कार्य जैसे प्रायमरी या नर्संरी स्कूल के शिक्षक, दुकानदार या सचिव आदि ।	☐	☐	☐	☐
(र) कौशलयुक्त व्यवसाय जैसे–क्राफ्टमैन, लुहार, बढ़ई तथा बिजली वाला आदि ।	☐	☐	☐	☐
(ल) सेवा व्यवसाय (service worker) जैसे–क्लर्क, टाइपिस्ट, स्टेनो, पुलिस-मैन, फायरमैन तथा सेना के नॉन-कमीशण्ड अफसर आदि ।	☐	☐	☐	☐
(व) मध्यम श्रेणी के कौशलयुक्त व्यवसाय (semi-skilled jobs) जैसे–मशीन-ऑपरेटर आदि ।	☐	☐	☐	☐
(स) बहुत मामूली कार्य (unskilled jobs) जैसे–सेवक, चपरासी, मजदूर, कृषक आदि ।	☐	☐	☐	☐

२. तुम्हारे परिवार के सदस्यों की सबसे अधिक शिक्षा कहाँ तक हुई है ?

	संरक्षक पिता	माता	सबसे बड़ा भाई	सबसे बड़ी बहन
(क) कालेज शिक्षा के बाद कोई उच्च स्तरीय उपाधि जैसे–Ph. D. अथवा D. Litt. आदि ।	☐	☐	☐	☐
(ख) स्नातकोत्तरीय शिक्षा जैसे–M.A., M.Sc., M.Com., M.Sc. (Ag.) आदि ।	☐	☐	☐	☐
(ग) स्नातकीय शिक्षा जैसे–B.A., B.Sc., B.Com., B.Sc. (Ag.) आदि ।	☐	☐	☐	☐
(घ) हायर सेंकेण्डरी / इण्टरमीडिएट	☐	☐	☐	☐
(य) हाई स्कूल	☐	☐	☐	☐
(र) मिडिल स्कूल	☐	☐	☐	☐
(ल) प्राइमरी स्कूल	☐	☐	☐	☐
(व) अशिक्षित	☐	☐	☐	☐

३. तुम्हारे परिवार के विभिन्न सदस्यों के पास कौनसी सबसे ऊँची व्यावसायिक उपाधियाँ हैं ?

	संरक्षक पिता	माता	सबसे बड़ा भाई	सबसे बड़ी बहन
(क) स्नातकोत्तरीय शिक्षा के बाद की व्यावसायिक उपाधि जैसे–D.E.V.G., या D. M., S. P., D. P. R. आदि ।	☐	☐	☐	☐
(ख) स्नातक शिक्षा के वाद की व्यावसायिक उपाधि या डिप्लोमा जैसे–B. Ed. आदि ।	☐	☐	☐	☐
(ग) हायर सेंकेण्डरी / इण्टर के बाद का व्यावसायिक डिप्लोमा जैसे–शिक्षण का डिप्लोमा, इन्जीनियरिंग का डिप्लोमा आदि ।	☐	☐	☐	☐
(घ) हाई स्कूल शिक्षा के बाद की प्रशिक्षण उपाधि ।	☐	☐	☐	☐
(य) मिडिल स्कूल के बाद की प्रशिक्षण उपाधि ।	☐	☐	☐	☐
(र) सामान्य प्रशिक्षण उपाधि ।	☐	☐	☐	☐
(ल) कोई भी प्रशिक्षण व्यावसायिक उपाधि नहीं है ।	☐	☐	☐	☐

४. आपके परिवार की कुल मासिक आय कितनी है ?

	सबसे बड़ा भाई
(क) २००० रुपये से अधिक	☐
(ख) १५०१ से २००० रुपये तक	☐
(ग) १००१ से १५०० रुपये तक	☐
(घ) ५०१ से १००० रुपये तक	☐
(य) २०१ से ५०० रुपये तक	☐
(र) १०१ से २०० रुपये तक	☐
(ल) ५० से १०० रुपये तक	☐

५. आपके परिवार पर कितना रुपया उधार है और कितना रुपया जमा है ?

रुपया	बैंक में जमा	पोस्ट-ऑफिस में जमा	उधार	एकदम जरूरत पड़ने पर कितना धन इकट्ठा कर सकते हैं
(क) २००० से अधिक	☐	☐	☐	☐
(ख) १५०१ से २००० तक	☐	☐	☐	☐
(ग) १००१ से १५०० तक	☐	☐	☐	☐
(घ) ५०१ से १००० तक	☐	☐	☐	☐
(य) २०१ से ५०० तक	☐	☐	☐	☐
(र) १०१ से २०० तक	☐	☐	☐	☐
(ल) ५० से १०० तक	☐	☐	☐	☐
(व) ५० से कम	☐	☐	☐	☐
(स) बिल्कुल नहीं	☐	☐	☐	☐

६. आपका मकान—
(क) स्वयं का है । ☐
(ख) स्वयं किराये पर हैं परन्तु घर का मकान किराये पर उठा रखा है । ☐
(ग) अपने मकान का एक भाग किराये पर उठा रखा है । ☐
(घ) अपना मकान नहीं है किराये पर रहते हैं । ☐

७. आपका मकान किस प्रकार का है ?
(क) कई मंजिल वाला या बड़ा बंगला । ☐
(ख) छोटा बंगला । ☐
(ग) पक्का मकान । ☐
(घ) साधारण मकान । ☐

८. स्कूल में—
(क) तुम्हारी फीस माफ है । ☐
(ख) तुम्हारे भाई-बहनों की फीस माफ है । ☐
(ग) फीस माफ कराने की जरूरत नहीं है । ☐

९. तुम्हारे भाई-बहन किस प्रकार के स्कूल में पढ़ते हैं ?
(क) कॉन्वेण्ट स्कूल या अन्य अंग्रेजी माध्यम का स्कूल ☐
(ख) राजकीय स्कूल ☐
(ग) राजकीय सहायता प्राप्त स्कूल ☐
(घ) प्राइवेट स्कूल ☐

१०. तुम्हारे घर में कौन-कौन से नौकर कार्य करते हैं ?
(क) ऑफिस में कार्य करने वाले चपरासी ☐
(ख) रसोईया ☐
(ग) आया ☐
(घ) माली ☐
(य) बर्तन माँजने वाला ☐
(र) सामान्य घरेलू नौकर ☐
(ल) कोई नौकर नहीं है । ☐

११. तुम्हारे पास कितने जोड़े—

	दो से कम	३ से ५ तक	५ से अधिक
(क) कपड़े हैं	☐	☐	☐
(ख) जूते हैं	☐	☐	☐

१२. तुम्हारे घर में नीचे लिखी चीजों में से जो चीजें मौजूद हों उनके सामने दिये गये कोष्ठों में (√) का निशान लगाइये :—
(क) कार ☐ मोटर-साइकिल या स्कूटर ☐ रिक्शा ☐ साइकिल ☐
(ख) टेलीविजन ☐ रिकार्ड प्लेयर ☐ रेडियो/ट्रांजिस्टर ☐ ग्रामोफोन ☐
(ग) रेफ्रीजरेटर ☐ सेफ ☐ स्टील अलमारी ☐
(घ) सोफासैट ☐ डाइनिंग टेबिल ☐ ड्रेसिंग टेबिल ☐
(य) उत्तम कुर्सीमेज ☐ साधारण कुर्सीमेज ☐
(र) बिजली का स्टोव ☐ वाटर बॉइलर ☐ गैस का चूल्हा ☐ प्रेशर-कुकर ☐

R

(ल) दीवारघड़ी ☐, मेजघड़ी ☐, हाथ घड़ी ☐,

(व) वैक्यूमक्लीनर ☐, कॉफी परक्यूलर ☐, बिजली का औटोमैटिक प्रेस ☐, साधारण प्रेस ☐,

(स) बिजली का पंखा ☐, मिक्सर (mixer) ☐, ग्राइण्डर ☐, सिलाई की मशीन ☐,

(श) कैमरा ☐, टेलिस्कोप ☐, डिनर सैट ☐, टी सैट ☐' लैमन सैट ☐, पिकनिक सैट ☐,

(ह) डाईनिगरूम ☐, ड्रॉइंग रूम ☐, अध्ययन कक्ष ☐, शयन कक्ष ☐, स्नानगृह ☐, शौचालय ☐ ।

१३. तुम्हारे घर में किस प्रकार के समाचार पत्र/पत्रिका आती हैं ?

(क) दैनिक ☐

(ख) साप्ताहिक ☐

(ग) मासिक ☐

(घ) त्रैमासिक ☐

(य) अर्द्धवार्षिक ☐

(र) वार्षिक ☐

(ल) कभी-कभी आती हैं ☐

(व) कभी नहीं ☐

१४. तुम्हारे मुहल्ले या नगर में उत्सव होने पर तुम्हारे परिवार के सदस्यों को बुलाया जाता है ?

(क) अक्सर बुलाया जाता है । ☐

(ख) कभी-कभी बुलाया जाता है । ☐

(ग) कभी नहीं बुलाया जाता है । ☐

१५. तुम/तुम्हारे माता-पिता आदि किसके सदस्य/पदाधिकारी हैं ?

(क) सामाजिक संस्थायें ☐

(ख) व्यावसायिक संस्थायें ☐

(ग) अन्य संस्थायें ☐

(घ) किसी संस्था के नहीं ☐

१६. तुम जिस मुहल्ले में रहते हो उसमें अधिकतर—

(क) बड़े-बड़े लोग रहते हैं । ☐

(ख) मध्यम वर्गीय लोग रहते हैं । ☐

(ग) क्लर्क या दुकान-सहायक जैसे लोग रहते हैं । ☐

(घ) साधारण वर्ग के लोग रहते हैं । ☐

(य) निम्न स्तरीय लोग रहते हैं । ☐

१७. तुम्हारे बारे में अधिकतर लोग सोचते हैं कि तुम—

(क) अत्यधिक प्रतिष्ठित परिवार के हो । ☐

(ख) कुछ अधिक प्रतिष्ठित परिवार के हो । ☐

(ग) मध्यम वर्गीय परिवार के हो । ☐

(घ) साधारण परिवार के हो । ☐

(य) निम्न स्तरीय परिवार के हो । ☐

१८. क्या तुम्हारा परिवार जाति प्रथा में विश्वास रखता है ?

(क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

१९. यदि तुम्हें घर से बहुत दूर पढ़ने या नौकरी करने जाना पड़े तो क्या तुम्हारे माता-पिता तुम्हें भेजना पसन्द करेंगे ?

(क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

२०. क्या तुम नयी चीजों/नवीन विधियों को एकदम स्वीकार कर सकते हो ?

(क) हां ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

Total Score=[   ] Category [   ]

गोपनीय

मानसिक योग्यता की सामूहिक परीक्षा (72)

(यह पुस्तिका किसी अनाधिकारी के हाथों में न जानी चाहिए) ।   (आवृत्ति 84)

इस प्रश्न पुस्तिका के सभी उत्तरों को केवल उत्तर-पत्र पर ही लिखना होगा ।

इस परीक्षा पुस्तिका पर कुछ लिखना या चिह्न न बनाना चाहिए ।

प्रारंभिक आदेश —

हम अपनी सामान्य मानसिक योग्यता की परीक्षा करना चाहते हैं ।

केवल 20 मिनट का समय है । आपके सामने 100 प्रश्न आयेंगे ।

इस परीक्षा के आरम्भ होने से पहले इसमें दिए गए सब प्रकार के प्रश्नों और उनके उत्तर लिखने की विधि को उदाहरण देकर समझाया जायेगा । हमें आशा है कि आपको उचित सफलता मिलेगी । सभी प्रश्न साधारण भाषा में हैं । प्रत्येक प्रश्न के दोनों ओर प्रश्न की क्रमिक संख्या छपी है । प्राय: सभी प्रश्नों के कुछ सम्भव वैकल्पिक उत्तर भी दिये गए हैं । हर एक वैकल्पिक उत्तर की संख्या भी उसके साथ छपी है । आपको हर प्रश्न को समझकर केवल उसके सही उत्तर को चुनना है, तथा उस उत्तर की संख्या को तत्काल उत्तर पत्र के क्रम अनुसार उचित स्थान पर लिखना है । प्रत्येक प्रश्न का उत्तर संख्या में देना है । अर्थात् अक्षरों में कुछ नहीं लिखना है ।

ध्यान रखें प्रत्येक प्रश्न का एक ही ठीक उत्तर है । समय अधिक नहीं है । सब प्रश्नों का सही उत्तर बहुत कम लोग दे सकते हैं । अतएव आपको खूब शीघ्रता से काम करना चाहिए और अधिक से अधिक सही प्रश्नों के उत्तर देने का प्रयास करना चाहिए । अगर कोई प्रश्न आपको अधिक कठिन लगता है, तब उस पर सोच विचार में अधिक समय नष्ट न करें । उसे छोड़ दें और उत्तर पत्र के निश्चित स्थान पर एक कोने में हल्का सा चिह्न बना दें, और अगले प्रश्न का उत्तर सोचकर तुरन्त उसके उचित स्थान पर लिखें । यदि अन्त में समय हो, तो अपने उत्तरों को दोहरा लीजिए तथा छूटे हुए प्रश्नों का हल सोचकर लिखिए ।

<p style="text-align:center">×   ×   ×</p>

आरम्भ करने की आज्ञा सुनकर ही आप प्रश्नों को पढ़ने और उत्तर लिखने का कार्य आरम्भ करें, और जितनी शीघ्रता से हो सके साफ उत्तर लिखिए । इस प्रश्न पुस्तिका पर आपको कुछ नहीं लिखना है, और न इस पर किसी प्रकार का चिह्न ही लगाना है ।

केवल उत्तर-पत्र पर यथोचित स्थान में उत्तर की संख्या ही लिखनी है ।

जोड़	जोड़	जोड़	जोड़	जोड़

कुल जोड़........   आंकिक श्रेणी.........   परीक्षक.......

1.	2.	3.	4.	5.	6.	7.	8.	9.
Poor	V. dull	Dull	Low	Average	Bright	Superior	V Super	Excellent
दुर्बल	अधिक मंद	मंद	कम कुशाग्र	औसत	तीव्र	उत्तम	अत्युत्तम	प्रतिभाशाली

इस परीक्षा में जिस प्रकार के प्रश्न पूछे गये हैं, उन के दो-दो उदाहरण नीचे दिये गये हैं। इन में से पहले का उत्तर भी उत्तर पत्र पर छपा है किन्तु दूसरे का उचित उत्तर देने का अभ्यास आप सरलता से कर सकेंगे ।

आइये अब हम इन को पढ़ें और इनको हल करने की विधि समझें :--

उदाहरण संख्या
↓

1. वृक्ष का अर्थ है,   (1) पेड़,   (2) जमीन,   (3) घास,   (4) फल   (1)
2. आज्ञा का अर्थ है,   (1) कठोर,   (2) स्वामी,   (3) निर्देश,   (4) यातना   (2)
3. अच्छाई का उल्टा है,   (1) चालाकी,   (2) बुराई,   (3) लड़ाई,   (4) नम्रता   (3)
4. जीवन का उल्टा है,   (1) निराशा,   (2) आनन्द,   (3) मिट्टी,   (4) मृत्यु   (4)
5. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :--   1,   2,   3,   4,   5,   6, ...   (5)
6. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :--   1,   14,   13,   12,   11,   10   ....   (6)
7. इन पाँच शब्दों में से बेमेल की संख्या उत्तर-पत्र पर लिखें :--
   (1) घोड़ा,   (2) मुर्गा,   (3) हाथी,   (4) भौंर,   (5) कुत्ता   (7)
8. इन पाँच शब्दों में से बेमेल शब्द की संख्या उत्तर-पत्र पर लिखें :--
   (1) निबन्ध,   (2) लेखक,   (3) उपन्यास,   (4) कविता,   (5) स्तम्भ   (8)
9. छाता एक लाभदायक वस्तु है, इसलिए कि वह   (1) कपड़े का बनता है ।
   (2) हमें धूप व वर्षा से बचाता है ।   (3) यह सब देशों में मिलता है ।   (9)
10. लोग बिल्लियाँ इसलिए पालते हैं, कि   (1) उनकी खाल कोमल होती है ।
    (2) वे कुत्तों से डरती हैं ।   (3) वे चूहे पकड़ती हैं ।   (10)
11. कमल : सिखाना : चाकू : (1) आम,   (2) काटना,   (3) लोहा,   (4) खाना   (11)
12. क्षीर : चावल :: हलवा : (1) बूरी,   (2) दही,   (3) घृत,   (4) सूजी   (12)
13. हरदेव से सुरजीत लम्बा है, किन्तु हरदेव से जगजीत नाटा है तो सब से लम्बा कौन है ?
    (1) हरदेव,   (2) सुरजीत,   (3) जगजीत   (13)
14. राम के पीछे गोविन्द खड़ा है, गोविन्द के पीछे चन्दन खड़ा है, और हरि के पीछे चन्दन खड़ा है, सो सब के पीछे कौन खड़ा है ?
    (1) राम,   (2) गोविन्द,   (3) चन्दन,   (4) हरि   (14)

------०

परीक्षा आरम्भ होने से पहले अपनी सभी शंकायें पूछ लीजिये ।

(ख) नहीं

१९. यदि तुम्हें घर से बहुत दूर पढ़ने या नौकरी करने जाना पड़े तो क्या तुम्हारे
    माता-पिता तुम्हें भेजना पसन्द करेंगे ?
    (क) हां □   (ख) नहीं □   (ग) अनिश्चित □
२०. क्या तुम नयी चीजों/नवीन विधियों को एकदम स्वीकार कर सकते हो ?
    (क) हां □   (ख) नहीं □   (ग) अनिश्चित □

Total Score = [   ] Category [   ]

जब तक कहा न जाय

कृपया यह

पन्ना मत उलटिये

जोड़	जोड़	जोड़	जोड़	जोड़

कुल जोड़........... प्रतमक श्रेणी............ परीक्षक............

| 1.
Poor
दुर्बल | 2.
V.dull
अधिक मंद | 3.
Dull
मंद | 4.
Low
कम | कुप्रज्ञ | 5.
Average
औसत | 6.
Bright
तीव्र | 7.
Superior
उत्तम | 8.
V Super
अत्युत्तम | 9.
Excellent
प्रतिभाशाली |

पृष्ठ 1 (पहला)

मानसिक योग्यता की सामूहिक परीक्षा (72)

(उत्तर-पत्र पर क्रमांक के अनुकूल उचित उत्तर की संख्या लिखें) ।

प्रश्न संख्या
↓

1. प्रकाश का उल्टा है, (1) काला, (2) लैम्प, (3) सूट (4) अन्धकार (1)
2. कृपा का अर्थ है, (1) धर्म, (2) कर्म, (3) दया, (4) दान (2)
3. पुलिस थाना चौबीस घण्टे खुला रहता है, क्योंकि (1) पुलिस अधिकारियों को 24 घण्टे का वेतन मिलता है । (2) लूटमार और दंगे की घटनाएँ किसी समय हो सकती हैं । (3) पुलिस वालों को दिन रात की वर्दियाँ मिलती हैं । (3)
4. मोटा का उल्टा है, (1) छोटा, (2) पतला, (3) हल्का, (4) परिश्रमी (4)
5. घर का अर्थ है, (1) बीवी, (2) परिवार, (3) मकान, (4) खर्च (5)
6. इन पाँच शब्दों में से बे-मेल शब्द का अंक उत्तर पत्र पर लिखें—
   (1) प्लेट, (2) चम्मचा, (3) प्याला, (4) पतीला, (5) केला (6)
7. भीतर का उल्टा है, (1) बाहर, (2) खुला, (3) मैदान, (4) तीव्र (7)
8. विद्या का अर्थ है, (1) पुस्तक, (2) ज्ञान, (3) रहस्य, (4) विज्ञान (8)
9. लक्ष्मण की आयु से सीता बड़ी है, परन्तु लक्ष्मण से भरत छोटा है । तब इनमें सबसे बड़ा कौन है ?
   (1) लक्ष्मण, (2) भरत, (3) सीता (9)
10. साधु का उल्टा है, (1) झगड़ा, (2) दुष्ट, (3) भजन, (4) लड़का (10)
11. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) मोटर, (2) साइकिल, (3) ताँगा, (4) तार, (4) रेलगाड़ी (11)
12. विष का उल्टा है, (1) मीठा, (2) औषध, (3) अमृत, (4) शिव (12)
13. ऐहमद से अनवर नाटा है, किन्तु अनवर से हमीद नाटा है, तो सबसे नाटा कौन है ?
    (1) ऐहमद, (2) हमीद, (3) अनवर (13)
14. बलवान का अर्थ है, (1) मोटा, (2) धनवान, (3) प्रधान, (4) शक्तिवान (14)
15. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) चम्पा, (2) चमेली, (3) चाय, (4) गेंदा, (5) गुलाब (15)
16. अर्जुन से कमला अधिक दौड़ती है, किन्तु चपला से कमला पीछे रह जाती है, तो सबसे अधिक तेज कौन दौड़ता है । (1) चपला, (2) कमला, (3) अर्जुन (16)
17. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) मोटर, (2) रिक्शा, (3) ताँगा, (4) पैदल, (5) साइकिल (17)
18. "मुख में राम बगल में छुरी" का अभिप्राय है, (1) राम-राम कहने वाले सदा बगल में छुरी रखते हैं । (2) राम कहने से छुरी से रक्षा होती है, (3) अनेक दुष्ट लोग धर्म का पाखण्ड करते हैं । (18)
19. नीचे दिए संख्या-क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :— 8, 7, 6, 5, 4, 3, ... (19)
20. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) हृदय, (2) आँख, (3) कान, (4) नाक, (5) ओष्ठ (20)

[प्रश्न 21 के लिये देखिए पृष्ठ 2 (दूसरा)]

(शीघ्रता से कार्य करें)

(क) हाँ ☐ (ख) नहीं ☐ (ग) अनिश्चित ☐
१९. यदि तुम्हें घर से बहुत दूर पढ़ने या नौकरी करने जाना पड़े तो क्या तुम्हारे माता-पिता तुम्हें भेजना पसन्द करेंगे ?
    (क) हाँ ☐ (ख) नहीं ☐ (ग) अनिश्चित ☐
२०. क्या तुम नयी चीजों/नवीन विधियों को एकदम स्वीकार कर सकते हो ?
    (क) हाँ ☐ (ख) नहीं ☐ (ग) अनिश्चित ☐

Total Score=[ ] Category [ ]

(उत्तर-पत्र पर यथा-स्थान उचित उत्तर की संख्या लिखें।)   प्रश्न-संख्या

21. जूते चमड़े के इसलिए बनते हैं, (1) कि यह अधिक चलता है। (2) वह मृत पशु
    की खाल से बनता है   (3) यह सब देशों में पाया जाता है।   (21)

22. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें :—   6   11   16   21   26, ...   (22)

23. सांच को आंच नहीं होती, इसलिए कहते हैं कि (1) सच बोलने वाले को आग नहीं जलाती।
    (2) सत्य की विजय होती है।   (3) सच्चे आदमी के घर में आंच नहीं निकलती।   (23)

24. नीचे दिये संख्या-क्रम के अनुसार आगे की संख्या पत्र
    पर लिखें—   3,   6,   9,   12,   15,   18, ...   (24)

25. विदेश जाने के लिए लोग विमान यात्रा पसन्द करते हैं, इसलिए कि (1) इसमें थोड़ा समय लगता है।
    (2) यात्रा में खाने-पीने का पूरा प्रबन्ध होता है। (3) वह हवा में भूमि से ऊपर उड़ते हैं।   (25)

26. इन पांच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें—
    (1) हाकी,   (2) फुटबाल,   (3) शतरंज,   (4) क्रिकेट,   (5) टेनिस   (26)

27. पापी का मन सदा शंकित रहता है, इसलिए कि   (1) उसको नरक का कष्ट भोगना पड़ेगा।
    (2) शंकित मन वाले पाप करते हैं। (3) पापी की पोल खुलने का डर रहता है।   (27)

28. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें :— 6,   11,   17,   23,   29,   35,   (28)

29. एक देश में रेल की बहुत सी लाइनें होनी चाहिए, इसलिए कि (1) इनमें माल और मनुष्यों के
    आने-जाने की सुविधा होती है। (2) इनसे व्यापार को लाभ होता है। (3) इनके द्वारा देश में
    खाद्य पदार्थों का मूल्य कम हो जाता है।   (29)

30. हीरा का अर्थ है,   (1) मोती,   (2) महंगा,   (3) पत्थर,   (4) जवाहर   (30)

31. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें—   3,   12,   21,   30,   39,   48, ...   (31)

32. इन पांच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें—
    (1) कालीदास, (2) तुलसीदास, (3) जयशंकर प्रसाद, (4) बुद्ध,   (5) टैगोर   (32)

33. नीचे दिये संख्या क्रम के अनुसार की एक संख्या उत्तर-पत्र
    पर लिखें—   14,   17,   20,   23,   26,   29   ....   (33)

34. घोड़ा : टाँग :: गाड़ी :   (1) बारक,   (2) पहिया (3) सड़क,   (4) टट्टू,   (34)

35. इन पांच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें—
    (1) पास,   (2) दूर,   (3) परे,   (4) यहाँ,   (5) धीमा   (35)

36. लिपिक : अध्यक्ष :: सैनिक   (1) मजदूर,   (2) विक्रेता,   (3) कप्तान (4) चालक   (36)

37. इन पांच शब्दों में से बे-मेल शब्द का अंक उत्तर पर लिखें—
    (1) चलना, (2) सोना, (3) गाना, (4) दौड़ना, (5) नाचना   ....   (37)

38. तरल : ठोस :: पानी :   (1) बर्फ,   (2) मछली,   (3) तैरना,   (4) स्नान   (38)

39. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें—1,   2,   2,   4,   8,   16,   32   ....   (39)

40. जनवरी : फरवरी :: जुलाई : (1) मार्च, (2) अगस्त, (3) रविवार,   (4) जून   (40)

[प्रश्न 41 के लिए पन्ना उलटिये, और देखिए पृष्ठ 3 (तीसरा)]   (शीघ्रता से कार्य करें।)

जोड़	जोड़	जोड़	जोड़	जोड़

कुल जोड़............   इतमक श्रेणी............   परीक्षक............

1.	2.	3.	4.	5.	6.	7.	8.	9.
Poor	V. dull	Dull	Low	Average	Bright	Superior	V Super	Excellent
दुर्बल	अधिक मंद	मंद	थोड़ा कुबुद्ध	औसत	तीव्र	उत्तम	बहुतउत्तम	प्रतिभाशाली

(उत्तर-पत्र पर यथा-स्थान उचित-उत्तर की संख्या लिखें।) प्रश्न संख्या ↓

41. नीचे दिये संख्या क्रम के अनुसार, आगे की एक संख्या उत्तर-पत्र
    पर लिखें :—   21,   19,   17,   15,   13,   11,   (41)

42. बहन : भाई :: मासी :   (1) चाचा,   (2) बुआ,   (3) बाबा,   (4) मामा   ...   (42)

43. गोवर्धन की मोटाई चन्द्रन से कम है, और चन्द्रन से अधिक मोटा गिरधारी है, तो सबसे
    दुबला कौन है ?   (1) चन्द्रन,   (2) गिरधारी,   (3) गोवर्धन   (43)

44. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें :   18,   16,   14,   12,   10,   8   ....   (44)

45. हँसना : रोना :: बचपन :   (1) खेलकूद   (2) बुढ़ापा   (3) मारपीट   (4) हार   (45)

46. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) गाय,   (2) भैंस,   (3) घोड़ा,   (4) भेड़,   (5) बकरी   ....   (46)

47. क्रूर का उल्टा है,   (1) सज्जन,   (2) भला,   (3) दयालु,   (4) कठोर   (47)

48. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) कूदना,   (2) फाँदना,   (3) भागना,   (4) खड़े रहना,   (5) चलना   (48)

49. पदमा से रणजीत अच्छी सिलाई करता है, किन्तु पुष्पा से पदमा अच्छा कार्य करती है तब सिलाई
    में सबसे अच्छा कौन है ? (1) रणजीत,   (2) पदमा,   (3) पुष्पा   (49)

50. इन पाँच शब्दों में से शब्द का अंक उत्तर पत्र पर लिखें :—
    (1) मिट्टी,   (2) लकड़ी,   (3) शिक्षा,   (4) कंकर,   (5) पत्थर   (50)

51. उद्यम का उल्टा है   (1) वियोग,   (2) डरपोक,   (3) विश्राम,   (4) आलस्य   (51)

52. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें :— 78,   67,   56,   45,   34,   23   ....   (52)

53. फल :: सेब : पुष्प :   (1) अनार   (2) बादाम   (3) गुलाब   (4) जामुन   (53)

54. मोहन से नाटा राम है। और किशन से नाटा राम है। तब सबसे कम लम्बा कौन है ?
    (1) मोहन,   (2) किशन,   (3) राम   (54)

55. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र
    पर लिखें :—   5,   6,   8,   11,   15,   20   ....   (55)

56. "झूठ के पाँव नहीं होते।" यह इस कारण कहा जाता है कि (1) लगड़े मनुष्य बहुत झूठ बोलते हैं।
    (2) झूठे मनुष्य की पोल शीघ्र खुल जाया करती है। (3) झूठ बोलने वाले बहुत बार चलते समय
    ठोकर खाते हैं :   (56)

57. नाव : माझी :: मोटर :   (1) स्वामी,   (2) यात्री,   (3) नगर,   (4) चालक   (57)

58. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) खाट,   (2) कुर्सी   (3) प्लेट,   (4) सोफा   (5) पीढ़ा   (58)

59. मकान : ईंट :: सेना :   (1) सिपाही,   (2) पत्थर,   (3) हथियार,   (4) युद्ध   (59)

60. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
    पर लिखें :—5,   6,   9,   10,   13,   14   (60)

[प्रश्न 61 के लिए देखिए पृष्ठ 4 (चौथा)]   (शीघ्रता से कार्य करें)

(क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

१९. यदि तुम्हें घर से बहुत दूर पढ़ने या नौकरी करने जाना पड़े तो क्या तुम्हारे
    माता-पिता तुम्हें भेजना पसन्द करेंगे ?
    (क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

२०. क्या तुम नयी चीजों/नवीन विधियों को एकदम स्वीकार कर सकते हो ?
    (क) हां ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

Total Score = [   ] Category [   ]

(उत्तर-पत्र पर यथा स्थान-उचित उत्तर की संख्या लिखें।)   प्रश्न संख्या।

61. सम्पादक : पत्रिका : : व्यापारी : (1) बाजार, (2) विज्ञापन, (3) दुकान, (4) समाचार   (61)

62. आश्चर्य का अर्थ है, (1) निराला, (2) विस्मय, (3) घबराहट, (4) अनुभव   (62)

63. चन्द्रमा : : पृथ्वी : पृथ्वी, (1) सागर, (2) मंगलतारा, (3) सूर्य (4) मछलियां   (63)

64. इन पाँच शब्दों में से बेमेल शब्द की संख्या उत्तर पत्र पर लिखें :—
    (1) गोभी, (2) गाजर (3) ककड़ी (4) मूली (5) धनियां   (64)

65. सोना का अर्थ है, (1) कनक, (2) खाद, (3) घन, (4) माला   (65)

66. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
    में लिखें :— 9, 12, 14, 17, 19, 22   (66)

67. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें :—
    (2) भूखा, (2) मरा, (3) प्यासा, (4) थका, (5) शूद्र   (67)

68. सदाशिव से मुरारी लम्बा है। किन्तु मुरारी से वीरेन्द्र नाटा है। और त्रिलोकी से मुरारी नाटा है,
    तो सबसे लम्बा कौन है ? (2) सदाशिव, (2) मुरारी (3) वीरेन्द्र (4) त्रिलोकी   (68)

69. वृक्ष : लता : : फल : (1) फूल, (2) चम्पा, (3) मोतिया, (4) सातसिरी   (69)

70. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
    पर लिखें :— 8, 9, 12, 13, 16, 17   (70)

71. नेता : जनता : : अधिकारी : (1) चुनाव (2) भाषण, (3) कर्मचारी, (4) निर्णय   (71)

72. आरेखन कला में राम से गार्गी चतुर है। किन्तु उसकी अपेक्षा सीता चतुर है। अतः सबसे
    चतुर कौन है ?   (1) गार्गी, (2) सीता, (3) राम,   (72)

73. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें :
    (1) घोड़ा, (2) ऊँट, (3) कंगारू, (4) गधा, (5) भैंसा   (73)

74. चित्र : खड़ा : : सिनेमा : (1) लाता, (2) चलता, (3) हँसता, (4) रोता   (74)

75. नीचे दिए संख्या क्रम के अनुसार आगे की संख्या एक उत्तर पत्र
    पर लिखें :— 29, 28, 26, 23, 19, 14   (75)

76. मेरे विचार में यदु से चीता चतुर है किन्तु कमला से रमा निस्सन्देह चतुर है। और सीता से रमा बन्द
    है। तो सबसे चतुर कौन है ?   (1) यदु, (2) कमला, (3) रमा, (4) सीता   (76)

77. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
    पर लिखें : 7, 8, 10, 13, 17, 22   (77)

78. सभ्यता का अर्थ है,   (1) वस्त्र, (2) कला, (3) ज्ञान, (4) संस्कृति   (78)

79. "जिसकी लाठी उसकी भैंस" कहने का अभिप्राय है कि (1) भैंस वाले के पास लाठी आवश्यक
    होती है। (2) अधिक बलवान की बात सबको माननी पड़ती है। (3) लाठी देखकर भैंस अधिक
    दूध देती।

80. जूलियट : रोमियो : : संयोगिता :   (1) स्वयंवर, (2) जयचन्द
                                              (3) पृथ्वीराज, (4) अकबर

[प्रश्न 81] के लिए पन्ना उलटिए, देखिए पृष्ठ 5 (पाँचवां)   (शीघ्रता से कार्य करें)

जोड़	जोड़	जोड़	जोड़	जोड़

कुल जोड़ ....   प्रतभक श्रेणी ....   परीक्षक ....

1.	2.	3.	4.	5.	6.	7.	8.	9.
Poor	V. dull	Dull	Low	Average	Bright	Superior	V. Super	Excellent
दुर्बल	अधिक मंद	मंद	कम कुशाग्र	औसत	तीव्र	उत्तम	बहुत्तम	प्रतिभावान

(उत्तर पत्र पर यथा स्थान उचित उत्तर की संख्या लिखें ।)   प्रश्न संख्या
↓

81. अनेक वर्षों तक हवाई जहाज सफल न हुए, (1) वे बहुत भारी बनाये जाते थे ।
 (2) उनके कल पुर्जे बहुत जटिल होते थे ।   (3) एक उत्तम इंजन नहीं बन पाया था ।   (81)

82. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
 पर लिखें :—   4,   6,   9,   11,   14,   16   (82)

83. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें ।
 (1) चिड़िया,   (2) तोता,   (3) बुलबुल,   (4) कबूतर   (5) उल्लू   (83)

84. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
 पर लिखें :—   8,   9,   11,   12,   14,   15   (84)

85. इन पाँच शब्दों में बेमेल शब्द का अंक उत्तर पत्र पर लिखें :—
 (1) बया,   (2) पुरी,   (3) प्रयाग,   (4) द्वारिका,   (5) दिल्ली,   (85)

86. दैनिक : मासिक :: पत्र : (1) कहानियाँ, (2) समाचार, (3) पत्रिका, (4) संवाद   (86)

87. ऋण का उल्टा है,   (1) धन,   (2) बचत,   (3) बनिया,   (4) व्यापार,   (87)

88. कोट : पेन्ट :: कुरता : (1) समाचार, (2) टोपी, (3) पजामा, (4) पगड़ी   (88)

89. विस्तृत का उल्टा है, (1) विशाल, (2) कमरा (3) पतला (4) संकुचित   (89)

90. पेन्सिल : चाकू :: कापी : (1) पुस्तक, (2) बोर्ड, (3) ताक लेख   (90)

91. पाँच शब्दों में बेमेल शब्दों का अंक उत्तर पत्र पर लिखें :—
 (1) पहुरा,   (2) प्रभात,   (3) बटा,   (4) मिनट,   (5) क्षण   (91)

92. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र
 पर लिखें :—   2,   3,   5,   6,   8,   9   (92)

93. श्वेत : हिम :: श्याम : (1) दिन, (2) चिड़िया, (3) कौवा (4) रात   (93)

94. नीचे दिए संख्या क्रम के अनुसार आगे की संख्या उत्तर पत्र
 पर लिखें :—   27,   26,   24,   21,   17,   12,   (94)

95. विहंग का अर्थ है,   (1) मोर,   (2) पक्षी,   (3) भट्ठा,   (4) निषाद   (95)

96. रमा की बुद्धि देवकी से प्रखर है, पर सीता की बुद्धि सावित्री से हीन है, किन्तु देवकी
 की बुद्धि सावित्री से उत्तम है, तो सबसे बुद्धिमान कौन है ?
 (1) देवकी,   (2) सीता,   (3) रमा,   (4) सावित्री   (96)

97. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें :—
 (1) हिमालय,   (2) केरल,   (3) मेघालय,   (4) भोपाल,   (5) हरियाणा   (97)

98. मोटा का उल्टा है,   (1) भारी,   (2) लम्बा,   (3) तगड़ा,   (4) कठोर,   (98)

99. गलत का अर्थ है,   (1) बुरा,   (2) विष,   (3) कड़बा,   (4) सरल   (99)

100. मकड़ी : मक्खी :: बिल्ली : (1) कुत्ता, (2) पिल्ला, (3) दूध, (4) चूहा   (100)

(यदि समय बाकी है तो अपने उत्तरों को दोहराइए ।)

(क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

१९. यदि तुम्हें घर से बहुत दूर पढ़ने या नौकरी करने जाना पड़े तो क्या तुम्हारे
 माता-पिता तुम्हें भेजना पसन्द करेंगे ?
 (क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

२०. क्या तुम नयी चीजों/नवीन विधियों को एकदम स्वीकार कर सकते हो ?
 (क) हाँ ☐   (ख) नहीं ☐   (ग) अनिश्चित ☐

Total Score=[   ] Category [   ]

नाम .... कक्षा .... स्कूल/कालेज/अन्य...........................

दिनांक .... आयु ... वर्ष ..... माह ....

	उदाहरण
1	1
2	
3	2
4	
5	7
6	
7	5
8	
9	2
10	
11	2
12	
13	2
14	

योग्यता Ability	अंक Score	श्रेणी Grade
V अ.		
N. भां		
R त		

पृष्ठ 1		पृष्ठ 2		पृष्ठ 3		पृष्ठ 4		पृष्ठ 5	
1		21		41		61		81	
2		22		42		62		82	
3		23		43		63		83	
4		24		44		64		84	
5		25		45		65		85	
6		26		46		66		86	
7		27		47		67		87	
8		28		48		68		88	
9		29		49		69		89	
10		30		50		70		90	
11		31		51		71		91	
12		32		52		72		92	
13		33		53		73		93	
14		34		54		74		94	
15		35		55		75		95	
16		36		56		76		96	
17		37		57		77		97	
18		38		58		78		98	
19		39		59		79		99	
20		40		60		80		100	
जोड़		जोड़		जोड़		जोड़		जोड़	

कुल जोड़ .... अंतमक श्रेणी............. परीक्षक.................

1.	2.	3.	4.	5.	6.	7.	8.	9.
Poor	V.dull	Dull	Low	Average	Bright	Superior	V Super	Excellent
दुर्बल	अधिक मंद	मंद	मंद कुचाग्र	औसत	तीव्र	उत्तम	बहुत्तम	प्रतिभावान